

Final Technical Report

GOVERNANCE REVIEW OF THE YELLOWKNIFE AIRPORT



September 2015



Institute on
Governance
LEADING EXPERTISE

Institut sur
la gouvernance
EXPERTISE DE POINTE

The Lindbergh Group Inc.



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EXECUTIVE SUMMARY

The Government of the Northwest Territories (GNWT) is facing some of the same issues the federal government faced when it developed and implemented the National Airports Policy (NAP) in the early 1990s: fiscal restraints impacting on essential capital infrastructure investments; and a greater acceptance of private sector involvement in developing, managing and operating public infrastructure across a broad range of options from full privatization and ownership, through concession agreements and management contracts.

The commercialization of the Canadian airport system through the NAP has proven to be very successful for medium to large sized airports, and the GNWT is interested in re-examining the potential for change, and particularly the inherent benefits and costs in some of the options.

In 2015 the GNWT commissioned a third-party study to fully explore alternatives to the current governance of the Yellowknife Airport (YZF). Since taking over the airport from the federal government in 1995, the GNWT has faced a number of financial challenges relating to the airport, including operating cash flow and access to capital.

This is not the first time that the GNWT has considered changing the governance of YZF from a traditional line department to some other stand-alone entity, such as an airport authority, and to that end has commissioned several studies during the past decade that have suggested changes. While the findings of those studies supported the business case for change, the status quo prevailed.

This report explores the full continuum of governance options including status quo (and its associated option of revolving fund), Crown Corporation, airport authority and privatization; providing an analysis of each option.



While each of these models was examined, in the final analysis the most striking scenarios for decision makers comes down to maintaining the status quo, moving towards a crown corporation, an airport authority or some form of privatization.

Evolution of Airport Governance Across the Country

As the case studies presented in the report demonstrate, most commercial airports in the country have moved away from a traditional line department model for several key reasons, including:

- There are traditional inefficiencies associated with running a commercial operation within a government department, including procurement, hiring and advertising constrictions.

- In the private sector, clear price signals force change and adaptation in the normal course of the business operation; these price signals are not ordinarily present in a government line department arrangement without traditional supply and demand considerations.
- Airports managed within line departments don't always have the freedom to charge sufficient fees to cover costs because of the concern from budget setters that it will be perceived as a tax hike.
- Airport managers have discovered the value of having community engagement on the board of directors, in order to raise awareness, seek feedback and ensure community partnerships that is some times not possible when the airport is run as a line department.
- Government finance departments have benefitted by devolved airports having access to capital, and long-term investment decisions, without the debt showing up on the books of the line department.
- The culture of arms length agencies tend to be more opportunistic and entrepreneurial than a traditional line department.

In conducting the study, the consultant considered three critical areas in developing its analysis and findings relevant to YZF and the NWT: first, what lessons could be drawn from changes in the governance of other airports (and other infrastructure) in the last 25 years; second, are there beneficial changes that could be made from a YZF and GNWT perspective; and, third, how could GNWT ensure that community, user and tenant considerations are properly met in moving forward to a more sustainable future?

Key Findings

There are five key findings from this study.

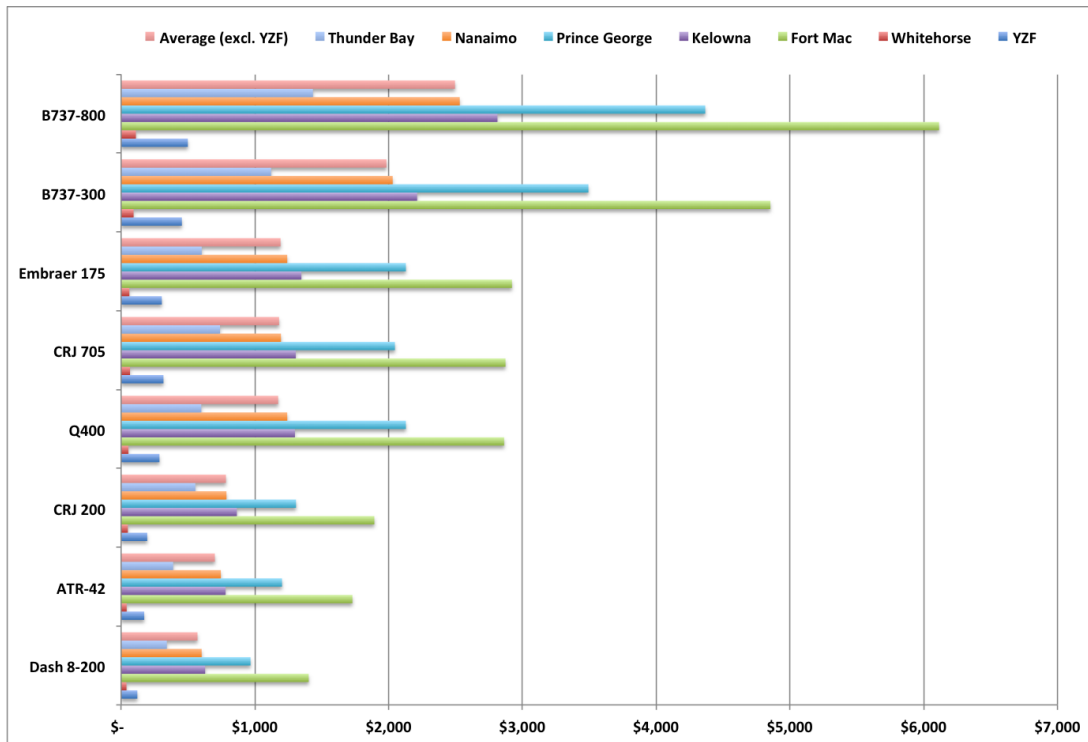
Finding #1

YZF provides value to the broader GNWT by being a well-run airport with a dedicated and well-managed workforce. In turn it is well supported by, and actively partners with, other Government departments. However, there is an implicit subsidy currently of some \$3 Million under the status quo arrangement which will likely continue without a change in the underlying governance of this essential piece of NWT economic infrastructure.

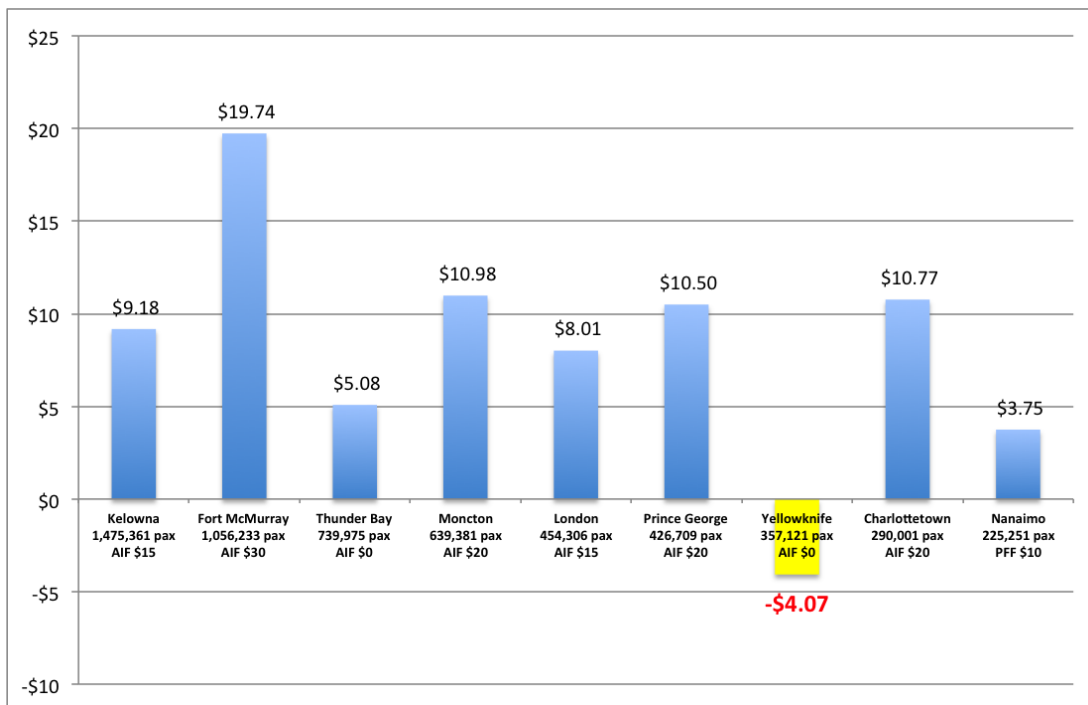
Finding #2

The GNWT does not need to give up ownership of the Yellowknife Airport for it to be viable. YZF has the passenger flow and airline competition to be self-sustaining on a commercial basis. Yet, the fees and charges levied by the airport are significantly lower than its peers, including smaller airports, leading to a direct effect on the bottom line. The following two tables highlights the differences between peer airports.

Fees and charges at YZF versus peer airports



Per passenger surplus/loss including AIF (2013)



Finding #3

If an effective revenue and expenditure framework was instituted, the airport would not require annual operating subsidies from the Department of Finance (currently some \$3 Million per fiscal year).

As the airport is run by a government department, the natural constraints of government operations have historically driven decisions, as opposed to commercial considerations. For example, income for the airport comes from the consolidated fund and is often the source of both political debate (budget setting), and internal departmental policy (allocation between all NWT airports). Most, if not all commercially viable airports across the country raise sufficient direct revenues from airlines, passengers and concessions to pay for operating and capital expenses without needing to resort to the general taxpayer. In this sense, Yellowknife could be considered an outlier.

Nothing prevents the GNWT from operating the airport like a commercial entity and raising fees to pay for services. However, the reality is that fees associated with running YZF have not risen to the degree that costs have over the past 20 or so years. Governments across the globe, including Canada, have come to realize that changing the governance often leads to better outcomes for the users and the community, in large part because airports can be singularly focussed on commercial viability and service. This is why most airports are run outside of a government department.

Finding #4

Without changes to the governance and operations of the Yellowknife Airport, the general taxpayers of GNWT will continue to subsidize the cost of the airport unnecessarily. Moreover, there will be lost opportunities: greater collaboration with the community, gains from economic spin-offs, and capital investments in other areas will not be realised.

By creating some distance from a line department and raising fees and charges to the average of peer airports, YZF would still be competitive but would no longer require subsidies from the GNWT, leaving those savings for other priorities of the Government. Moreover, the analysis demonstrates that the increase in fees and charges to the peer-average will cost the user (passenger) approximately 2% to 3% increase in ticket price for a typical return flight “south” from YZF (based on September 2015 sample fares) and less than 1% for a typical intra-NWT flight as shown in Table 32.

Finding #5

Comprehensive change management will be required in order to move away from the status quo – legal, organizational, communication, HR, business modelling. However, in the judgement of the consultants, this short-term effort will benefit the airport, taxpayers, users and broader Yellowknife community in the long run.

But what model might work best for the Yellowknife Airport? The report does not recommend a specific governance model, rather it takes the view that any movement away from the status quo will benefit both the taxpayers of the GNWT and the services that users of the airport experience.

To illustrate the point a financial model was developed and various financial scenarios run to illustrate what the net effect might have been had certain changes been implemented in 2014. The Base Year used was the actual 2014 results. The various factors applied and assumptions used are illustrated in Table 1. Based on these scenarios, the beneficial effects on the airport's operating line are summarised below:

- Under the Status Quo, the 2014 Net Operating Loss amounted to some \$3.238 Million.
- Using the assumptions shown in Scenario 2, indicative of a crown corporation type structure, control is maintained by the government but is more arms-length. Assuming the distance from government control over day to day matters allows the crown corporation greater freedom to operate on a commercial basis, the airport would move to a small operating profit if a \$10 Airport Improvement Fee (AIF) for all departing passengers was introduced.
- Under Scenario 3, a community-based airport authority scenario, modest increases in fees & charges (including the levee of an AIF) eliminates the current subsidy from the taxpayer, and allows the airport to balance its budget and achieve an operating profit of between \$2.9M and \$4.3M (depending on the changes implemented) which would be reinvested into the airport.
- Under Scenario 4, with privatization assumptions, the airport achieves operating income between \$5.7M and \$7.0M, which could be reinvested into the airport.

As noted in the report, nothing prevents the GNWT from raising these fees under the status quo. However, history (and the infrastructure case studies) demonstrate that moving towards an alternative governance model would free YZF from political constraints, allow it to be driven by market considerations, give it access to capital, enable broader community engagement and likely stimulate some economic spin-off.

Recommended Next Steps

Should the GNWT choose to move away from the status quo to one of the options laid out in this report, a comprehensive change management plan will need to be considered. In that instance, the recommendation would be to implement the change in one, well-planned and well-explained exercise.

However, should the GNWT choose to transition change over a longer period of time, the following interim approach might be considered:

- Identify and record all revenues and expenses for YZF as part of the GNWT annual budget and audit.
- Appoint an Advisory Board – ideally made up of representation from the city, the GNWT, the business community and other key elements of civil society.
- Task the Advisory Board to provide advice and assistance to the Minister on the revenues, expenditures and operations of YZF. Indeed, the Advisory Board should be tasked with submitting a plan to the Minister on how to eliminate the annual GNWT subsidy to the airport.

- Appoint an interim executive from within the GNWT to lead the organization and to support the Advisory Board in developing its plan for the Minister.
- Provide the executive with the information required to support the Advisory Board as it deliberates on a plan, including projections on finances, asset management, development opportunities, cargo and passenger traffic.

YELLOWKNIFE AIRPORT (YZF)	YZF STATUS QUO		SCENARIOS (Note 1)								
	Base Year	2014 (\$000)	SCENARIO 1		SCENARIO 2		SCENARIO 3		SCENARIO 4		
			Assumptions	2014 (\$000)	Assumptions	2014 (\$000)	Assumptions	2014 (\$000)	Assumptions	2014 (\$000)	
OPERATING REVENUE											
Aeronautical Revenues (Note 2)	Base	\$2,105	1.25 x base	\$2,632	1.5 x base	\$3,158	2.5 x base	\$5,263	3.5 x base	\$7,369	
	\$0	\$0	\$10	\$1,324	\$15	\$1,986	\$18	\$2,383	\$20	\$2,648	
Non-Aeronautical	Lease revenue - ATB	\$230	1.25 x base	\$287	1.5 x base	\$344	3.0 x base	\$689	5.0 x base	\$1,148	
	Lease revenue - Non-ATB: Land (85%) (Note 4)	\$1,618	Base	\$1,618	Base	\$1,618	Base	\$1,618	Base	\$1,618	
	Lease revenue - Non-ATB: Other (15%)	\$286	1.25 x base	\$357	1.5 x base	\$428	3.0 x base	\$857	5.0 x base	\$1,428	
	Concession Revenue (Note 5)	\$255	1.25 x base	\$319	2.0 x base	\$510	3.0 x base	\$765	5.0 x base	\$1,275	
	Third Party Recoveries	\$309	Base	\$309	Base	\$309	Base	\$309	Base	\$309	
Total Operating Revenue		\$4,803		\$6,853		\$8,045		\$11,891		\$15,802	
OPERATING EXPENSES											
Salaries and other staff related costs	Base	\$2,847	Base	\$2,847	0.95 x base	\$2,705	0.95 x base	\$2,705	0.95 x base	\$2,705	
	Base	\$22	Base	\$22	Base	\$22	1.05 x base	\$23	1.10 x base	\$24	
	Base	\$813	Base	\$813	0.95 x base	\$773	0.90 x base	\$732	0.90 x base	\$732	
	Base	\$52	Base	\$52	Base	\$52	Base	\$52	Base	\$52	
	Base	\$1,248	Base	\$1,248	Base	\$1,248	Base	\$1,248	Base	\$1,248	
	Base	\$1,202	1.25 x base	\$1,502	1.5 x base	\$1,802	2 x base	\$2,403	3 x base	\$3,605	
	Base	\$454	Base	\$454	Base	\$454	Base	\$454	Base	\$454	
	Base	\$22	Base	\$22	Base	\$22	Base	\$22	Base	\$22	
	Total Operating Expenses		\$6,659		\$6,659		\$7,077		\$7,638		\$8,841
	OPERATING INCOME (LOSS) BEFORE OTHER		-\$1,856		\$193		\$968		\$4,253		\$6,961
OTHER EXPENSES											
PILT / Property Tax	Base	\$657	Base	\$657	Base	\$657	Base	\$657	Base	\$657	
	Base	\$60	Base	\$60	0.95 x base	\$57	0.90 x base	\$54	0.85 x base	\$51	
	Base	\$600	Base	\$600	0.95 x base	\$570	0.90 x base	\$540	0.85 x base	\$510	
	Base	\$15	Base	\$15	0.95 x base	\$14	0.90 x base	\$14	0.85 x base	\$13	
	Base	\$20	Base	\$20	0.95 x base	\$19	0.90 x base	\$18	0.85 x base	\$17	
Legal	\$30	Base	\$30	0.95 x base	\$29	0.90 x base	\$27	0.85 x base	\$26		
Total Other Expenses		\$1,382		\$1,382		\$1,346		\$1,310		\$1,273	
OPERATING INCOME (LOSS)		-\$3,238		-\$1,189		-\$378		\$2,943		\$5,688	
OPTION: New Intra-Territorial AIF (Note 7)	\$0	\$0	\$10	\$1,340	\$10	\$1,340	\$10	\$1,340	\$10	\$1,340	
ADJUSTED OPERATING INCOME (LOSS)				\$151		\$962		\$4,283		\$7,027	
	Effective Cost Increase for Passenger Travelling South (Note 8)		1.45%		2.21%		2.88%			3.41%	
	Effective Cost Increase for Passenger Within NWT/NU with Local AIF (Note 9)		0.61%		0.65%		0.79%			0.94%	

Notes to Table

Note 1	Scenarios from left to right reflect increasing level of devolution from GNWT department structure and political control
Note 2	Scenario 3 Aeronautical Revenues factored to achieve <u>approximate</u> average for benchmarked airports (AIF shown separately)
Note 3	New AIF applies only to departing pax leaving NWT ("Extra-Territorial") to go "south" (NOT including in-transit pax from communities) Extra-Territorial Enplaned/Deplaned Pax (Terminal & FBOs) - 2014 (per YZF): 264,759 Therefore, Extra-Territorial Departing Pax from YZF (Terminal & FBOs) in 2014 used in calculation: 132,380
Note 4	Land leases assumed to be at market rates as advised by YZF
Note 5	Parking assumed to be approx. 50% of 2014 concessions total. Also assumes parking revenues could have been \$200K if enhanced parking revenues forecast for 2015 had been achieved in 2014. Total for 2014 recast as: (\$110K - 50% (parking share)) + \$200K
Note 6	Indicates investment will be required to achieve revenue increases
Note 7	Additional Revenue if Intra-NWT/NU passengers pay a reduced Territorial AIF of \$10 as indicated when departing YZF Intra-NWT/NU Enplaned/Deplaned Pax (Terminal & FBOs) - 2014 (per YZF): 267,930 Therefore, Intra-NWT/NU Departing Pax from YZF (Terminal & FBOs) in 2014 used in calculation: 133,965
Note 8	Based on typical WestJet 14-day Advanced Purchase Return Fares to Calgary/Ottawa in Sept 2015 (assuming increased aeronautical and new AIF charges passed on to end-user (passenger))
Note 9	Based on typical Canadian North 14-day Advanced Purchase Return Fare to Inuvik (YEV) in Sept 2015 (assuming increased aeronautical and new Territorial-AIF charges passed on to end-user (passenger))

1. INTRODUCTION

1.1. BACKGROUND

The Government of the Northwest Territories (GNWT) is facing some of the same issues the federal government faced when it developed and implemented the National Airports Policy (NAP) in the early 1990s: fiscal restraints impacting on essential capital infrastructure investments; and a greater acceptance of private sector involvement in developing, managing and operating public infrastructure across a broad range of options from full privatization and ownership, through concession agreements and management contracts.

The GNWT has commissioned several studies during the past decade that have suggested changing the governance model at Yellowknife Airport (YZF). The commercialization of the Canadian airport system through the NAP has proven to be very successful for medium to large sized airports, and the GNWT is interested in re-examining the potential for change, and particularly the inherent benefits and costs in some of the options.

1.2. ENGAGEMENT OBJECTIVES

This Review is focused on providing key analytics to help the GNWT determine the future of YZF's operations and governance. Specifically, it will review YZF's current governance model, opportunities and operations, including policies and procedures that limit and enhance these opportunities, and compare these to other models with the goal of helping the GNWT determine the best approach to enhance operational efficiencies and increase revenues to fund growing expenditures and capital requirements. None of this takes place in a vacuum and this Review also highlights the context in which such decisions are made, with real world examples from other jurisdictions.

Importantly, the Consultant did not assume that if change was needed to the current governance structure that the answer lay in adopting the form of governance model instituted at many other Canadian airports. Instead it was mindful that there is a range of options, and there may be benefits for Yellowknife Airport in the context of its ownership structure for some form of hybrid, which would address the issues and use proven solutions from across a range of infrastructure.

1.3. ENGAGEMENT SCOPE

The purpose of the Review was three-fold:

1. Determine the pros and cons of governance models:
 - a. Status Quo;
 - b. Special Operating Agency/Revolving Fund;
 - c. Government Corporation;
 - d. Airport Authority;
 - e. Concession; and

f. Privatization.

2. Review the parameters and functions of these models with the existing model; and
3. Identify challenges and opportunities with the current model.

The review addressed key questions under five broad themes:

1. Airport operations cost and revenues:
 - a. What are the costs of owning and operating YZF?
 - b. What revenues could be derived from those operations under various governance models?
 - c. How do these costs and revenues compare to other airports in Canada of a similar size?
2. Current issues:
 - a. What are the current operational needs of YZF?
 - b. What are the short and long term capital expansion requirements?
3. Policy and regulation:
 - a. How are operations impacted by fiscal and operational policy?
 - b. What policies or procedures impact capital?
 - c. What policies impact existing and new revenue streams?
 - d. How would efficiency or effectiveness be improved by changing policies or procedures?
4. Governance considerations:
 - a. How are capital needs met today?
 - b. Can the current governance model address those needs?
 - c. Is YZF of sufficient size to operate independently?
5. Market impacts:
 - a. What general impact would an alternative governance model have on the people of the Northwest Territories?
 - b. What effects would various models have on air carriers operating in the market?
 - c. From a GNWT perspective, what are the financial, political, legal and socio-economic impacts of the governance models identified?
 - d. How can the Airport become a catalyst for economic development in the region?

1.4. OVERALL APPROACH AND METHODOLOGY

A overall approach to the Review is summarized below and is reflected in subsequent sections of this Report:



Phase 1: Situational Analysis. This phase analysed the current situation at YZF in the context of the external aviation, economic and policy environment within which it has to work:

- **Environmental Scan.** Includes: an overview of the Canadian civil aviation policy and regulatory environment; the financial and policy framework of the DOT within the GNWT; an overview of the aviation industry including trends; and highlights economic trends that could affect airport infrastructure and/or operations.
- **Yellowknife Airport (YZF).** Includes: a description of: the current governance structure, facilities and services, financial situation (operating), capital plan, aviation traffic, staffing levels and HR environment (pensions, unions etc.).
- **SWOTCH:** Includes: an analysis of the airport's current strengths, weaknesses, opportunities, threats and challenges faced under the extant operating and governance model.

Phase 2: Evolving Best Practices in Airport Governance. This phase undertook a top-level analysis of several governance models including but not limited to Airport Authority, Crown Corporation, and Revolving Fund, with case studies of each. Case studies were drawn from other airports, other transportation modes, and other industries with analogous infrastructure.

Phase 3: Options Identification and Analysis. Based on the previous phases, this section describes and analyzes a number of governance models, including: GNWT Department (Status Quo); Special Operating Agency (Revolving Fund); Crown Corporation; Airport Authority; and Public-Private-Partnership (P3). The analysis includes both quantitative and qualitative items. An examination of the relative costs, impacts, and efficiency potentials of the various governance models are included.

1.5. KEY ISSUES AND CONSIDERATIONS

In conducting the Review, the following elements were key to the issues under discussion:

- **National Airports System.** Since the late 1970s Transport Canada has investigated alternative service delivery options for its transportation infrastructure. The introduction of the National Airports Policy (NAP) in 1994 provided a detailed framework for transferring airport management and operation to local authorities. Some 71 airports then owned and operated by TC were designated for transfer by 1999, while the transfer of the largest and most profitable strategic airports – the 26 National Airports System (NAS) airports (those with more than 200,000 passengers or serving provincial or territorial capitals) was completed relatively early on. YZF is part of the NAS and any proposed changes to its governance regime must be mindful of the TC Transfer Agreement and the part that YZF plays within the NAS.
- **Are there beneficial changes that could be made at Yellowknife Airport?** The issue of governance at YZF has been discussed numerous times in the 20 years since devolution. While the Department of Transportation has investigated opportunities to improve the management efficiencies of YZF, it has not yet been successful in adopting a governance model that makes it as efficient and effective as it is thought it could be. In fact reports prepared for DoT in 2002, 2003, 2008 and 2010 identified the creation of an airport authority as a model to support capital expansion, operational issues, and improving the financial position of the airport. However, previous studies have not thoroughly examined the range of options for the Government of the Northwest Territories, nor the cost and benefits of those options.
- **Community and User Considerations.** Even among northern or remote communities, the YZF is unique for a number of reasons including the diversity of its major users, and the lifeline it provides the Territory. Key actors and stakeholders include the City of Yellowknife, the GNWT, residents (Denendeh and others), the Canadian Government, and the business community, including the Chamber of Commerce, the Mining Association, and the logistics and tourism industries. It could be argued that the collective stake in the airport is much broader than simply the GNWT if it is considered a truly strategic asset. Any changes to the current governance arrangement of YZF, should the GNWT move in that direction, must take into account these key stakeholders, including a comprehensive engagement strategy.

2. EVOLVING PRACTICES IN AIRPORT GOVERNANCE IN CANADA AND AROUND THE WORLD

2.1. INTRODUCTION

In the 1920s and 1930s, the early days of commercial aviation development, the “aerodromes” built to accommodate the new means of transportation and commerce was often founded by private-sector aviation companies and subsequently by municipal authorities. But as the need for more complex and capital-intensive infrastructure became apparent, and with the advent of the Second World War, national governments stepped in, and beginning in the early 1940s set about developing national chains of strategic airports and associated legislation and regulation to control them.

Airports in Canada during the 1950s were generally operated as public institutions.¹ The federal involvement was predicated on the view at the time that airports: were strategic and required government control; capital intensive beyond the capacity of the profit-driven private sector; focused on facilitating the needs of airlines rather than the wider public interest; required operating subsidies (for instance by keeping fees charged to airlines below cost recovery); and seen as “utilities” rather than stand-alone businesses.

By the early 1970s there were 4,000 commercial airports globally², with the majority in North America and Europe, and most in some sort of direct government ownership, development and operation.

Airport privatization initiatives originated in the late 1970s, most notable in the United Kingdom which went further and faster than any other jurisdiction based largely on the philosophical underpinnings of then Conservative Prime Minister, Margaret Thatcher, and the parlous state of the UK economy. Interestingly, Canada was in the vanguard of the movement, with serious study of the issue within government beginning in the mid 1970s although it would take another 15 years before devolution of airports became a reality here.

There have been significant changes in how airports are governed and organized in the last 25 years, and understanding those changes - some more successful than others - and some of the key drivers for change are important in the context of the debate around potential changes in governance of the Yellowknife Airport, and by extension the airport system within the Northwest Territories.

2.2. OVERVIEW OF PRIVATIZATION

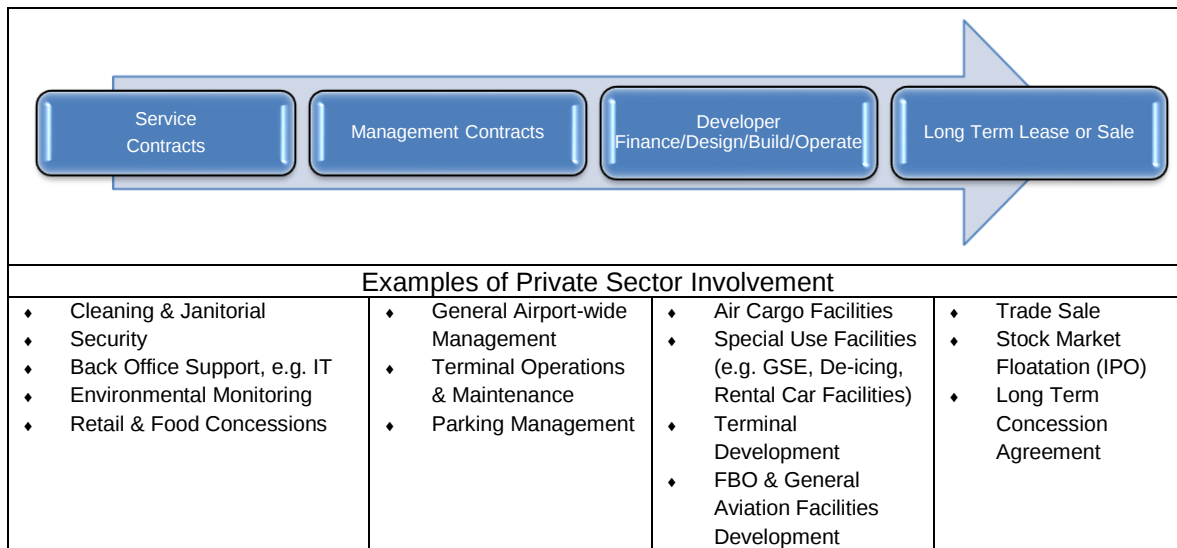
Privatization in an airport context can take many forms up to and including the transfer of an entire airport to private operation and/or ownership, but generally it refers to the shifting of governmental functions, responsibilities, and sometimes ownership, in whole or in part, to the private sector.

¹ The Potential for Privatization: The Case of Halifax International Airport”. Proceedings of the 29th Annual Meeting of the Canadian Transportation Research Forum (CTRF); pgs 965-979

² Airport Privatization: Background and Issues. BAA USA Inc. October 1993

There has been a range of private sector involvement in airports over many years as illustrated below. In addition, outsourcing to external public agencies such as police and municipal fire departments has become quite common.

Figure 1. Level of Private Sector Involvement



The reasons for the change from a public utility type governance mindset to a focused business orientation are many and varied but there are two over-riding drivers: philosophical; and economic.

Philosophically, some community leaders believe that government should not be in the business of running airports, that airports are not strategic-public-interest assets that require continuing public ownership, and that, on balance, the private sector is better placed to manage, operate and develop these essential pieces of infrastructure, with government reserving to itself the regulatory role to ensure continuing safe and secure operations.

On the economic front, many governments don't have the capital or balance sheets to support major airport investments and look to the private sector to bring capital – both monetary and human – to realise the full potential from their airports and airport systems. Increasingly, these essential infrastructure assets are competing with other more "essential" services – such as hospitals and schools – for seemingly ever more constrained public financing. Economically the case can be made for investments in transportation infrastructure over other priorities, but in reality the emotional vote sways the decision in favour of more "hot button" items.

Privatization isn't a one size fits all, and in most cases the degree of airport privatization falls into the category of "limited or partial privatization" as described in the continuum illustrated in the table³ below:

³ Based on research previously undertaken by Consultants now with The Lindbergh Group Inc.

Table 1. Degree of Airport Privatization

	None/Very Limited	Limited	Partial	Full
Ownership	Government	Government	Government	Private Sector
Investment	Government	Government	Private Sector	Private Sector
Management	Government	Private Sector	Private Sector	Private Sector
Example of Private Sector Involvement	Retail & Service Concessions	Full Airport Management Contract	Design-Build –Finance - Operate –Transfer (DBFOT) Whole or Part of Airport	Trade Sale, or Public Share Offering
Description	In many ways the original form of airport ownership and operation in which employees were typically public sector workers supported by a centralized and often remote bureaucracy. Characterized by public utility & monopolistic approach, slower decision-making, political interference, reluctance to market services, and often internal competition with other public departments in terms of capital investment.	Airports have had various levels of private sector involvement for some time, often starting by out-sourcing stand-alone elements of the business such as cleaning and car parking lot management. Gradually this has been expanded to include full airport management contracts, normally awarded after a competitive bid and for a fixed time period.	Partial privatization has proven to be a viable concept, with airport management, operation, development and investment generally being transferred for a fixed period of time for a monetary consideration. That may be an up front, lump sum payment at the beginning of the lease or concession (for example, in 2002, Sydney Airport in Australia was sold to the Southern Cross Airports Corporation for A\$4.233 billion, which included a 30-year right of first refusal over the development and operation of a second airport for Sydney), or an annual rent based on performance or revenues (for instance, most NAS airports in Canada).	The first true privatization in the airport sector occurred with the formation and subsequent sale of shares in the British Airports Authority in 1987. Many others have followed since, and BAA has been split up in recent years to encourage competition in the UK airport sector.
Example	Many Airports in USA	Albany Int'l Airport, NY, (AvPorts Management)	Canadian Airport Authorities	Gatwick International Airport, UK

2.3. CURRENT SITUATION

In early 2015 approximately 500 commercial aviation airports have some form of private-sector participation in their management or ownership: about 15% of that total are privately held. Even so, the percentage of airports privatised remains modest, with around 70% still entirely in public ownership.

In general, the bigger the airport, the higher the propensity towards privatization. By the end of 2015, 40 of the top 100 airports as measured by revenues will be either fully or partially owned by investors. According to a recent industry paper⁴, total 2014 revenues for these 40 airport companies was USD41 Billion, which accounts for slightly over 50% of the revenue of the entire top 100 airport groups.

Over the years, the number of privatisation deals has shown elements of cyclicity, peaking (1998, 2007) and going into somewhat of a slump several times (1999–2005, 2009–2011), often influenced by world events beyond the industry's control that restrict access to capital.

Most activity in the past few years has been focused on primary airports in emerging markets, with activity around secondary and tertiary level airports remaining weak,

⁴ CAPA Airport Finance and Privatisation Review 2014/15 dated March 2015

except for the privatization of some groups of regional airports. While airport valuations have fluctuated widely - from a high of 30 times earning in the mid 2000s and more recent lows of around 9x to 10x, it is expected that valuations will rise to around 12-15 times earnings in 2015.

The type of airport infrastructure investor has changed over time. In the late 1990s through the first decade of 2000 there was an influx of surface transport operators, and real estate developers in particular with regard to secondary and tertiary level airports. Now it is the pension funds that have asserted their primary position as investors with a long-term view of the sector.

Market Case Studies are presented below which provide a flavour of the different dynamics at play in global privatization initiatives in the sector.

2.4. CASE STUDIES: GLOBAL AIRPORT PRIVATIZATION

2.4.1. THE UNITED KINGDOM AND EUROPE

United Kingdom

In the UK, Margaret Thatcher's administration privatized the former British Airports Authority (BAA). Until 1966 it had been part of the Ministry of Aviation. In that year it became an independent government agency.

The transfer of BAA to the private sector in 1987 was probably the boldest move in the aviation sector in the latter half of the 20th Century, matched only by the US Airline Deregulation Act of 1978. Through a public listing of BAA plc on the London Stock Exchange, the government privatized the seven BAA airports⁵, initially owning a majority stake, and retaining a "golden share," entitling it to block a takeover by foreign investors, until 2003. At a stroke, BAA became the largest private sector airport operator in the world.

The UK subjected the privatized airports' fees & charges to an economic regulation regime administered by the UK Civil Aviation Authority (CAA), a government agency, which had additional authority over the largest airports. Statutory changes made in 2012 resulted in only airports with more than five million annual passengers now being subjected to government regulation of airport fees & charges. In addition, Heathrow, Gatwick, and Stansted were classed as "designated" airports and subject to closer regulatory supervision because of their economic and anti-competitive potential.

The privatization of BAA has not been without its critics. Some economists have argued that by selling BAA's seven airports all together, the U.K. government had, in effect, converted public assets into a regulated private monopoly. In 2009, the U.K. Competition Commission ordered BAA plc to divest Gatwick, Stansted, and either Edinburgh or Glasgow airports in order to maintain competition.

⁵ The airports originally owned by BAA plc were London Heathrow, London Gatwick, London Stansted, Glasgow, Edinburgh, Aberdeen, and Prestwick. BAA plc purchased Southampton Airport in 1990 and sold Prestwick in 1992. International Civil Aviation Organization, "Case Study: United Kingdom," February 2013, <http://www.icao.int/sustainability/CaseStudies/UnitedKingdom.pdf>

In 2006, BAA plc was acquired in a £10 Billion (USD\$15B) sale by Airport Development & Investment Ltd (ADI), a consortium led by Ferrovial Aeropuertos S.A. of Spain. Ferrovial then sold BAA's non-U.K. airport stakes such as Budapest and a number of Australian airports. The name BAA was officially dropped in 2012, and the company was rebranded as Heathrow Airport Holdings Ltd (HAH). Ferrovial remains its largest shareholder with a 25% stake.

Not all airport privatizations in the United Kingdom have been successful. The Welsh government purchased Cardiff Airport in Wales, formerly operated by a consortium of the Spanish companies Albertis and AENA, for £52 million in March 2013. The private owners were interested in selling after annual passenger numbers fell from 2.1 million in 2007 to just 1 million in 2012 and the airport became unprofitable. The Scottish government in November 2013 purchased Prestwick Airport in Scotland, which BAA plc had sold to another private operator in 1992 and was most recently owned by the New Zealand company Infratil, for the nominal sum of £1. As with Cardiff, several carriers had ceased service at Prestwick and passenger numbers had fallen dramatically.

The ownership changes in the UK in the last twenty years or so are emblematic of the changing face of airport ownership: from government department or agency, to public-private entities (including listing on national stock exchanges), to national private sector ownership, to ownership and/or concession operation by international airport management groups, sovereign funds and pension funds.

Europe

Subsequent to the British privatization action of 1987, a number of governments in Europe privatized major airports, either fully or partially. Some of these private owners or operators then acquired full or partial ownership interests in other airports. At the same time, some public-sector airport operators expanded by providing management services at other airports. Entities such as the Spanish Public Entity AENA, and the Dutch Schiphol Group are active internationally. The Schiphol Group, which the Dutch government still owns a majority, rebuilt and now operates Terminal 4 at Kennedy International Airport in New York. According to a 2010 study by Airports Council International—Europe, mixed public private shareholders own approximately 13% of European airports and 9% are fully privatized.

The most extensive and recent airport privatization event took place in Spain in late 2014/early 2015 when the Spanish government made good on its intention to sell off a minority (49%) shareholding in AENA, the world's largest airport operator in terms of passenger numbers, handling some 200 million in 2014, and having 46 airports in its portfolio.⁶ The partial privatization was an interesting process, including the trade sale of 21% of the equity going to three pre-chosen investor groups (including two, interestingly, who had no previous airport exposure), and the remaining 28% divested through an oversubscribed IPO. In many ways this structure is more P3-like, with the government maintaining a majority position and very similar to the structures for both the Aeroports de Paris and Fraport groups.⁷

⁶ AENA's Part Privatization: CAPA, April 14th, 2015

⁷ The Ownership of Europe's Airports, Airports Council International, 2010

Beyond this very recent and successful example that investor interest in airports remains strong, at least in Europe, there has been a recent revival of interest in the concession development of regional airports in France, and in 2013 the privatization of the government airport operator ANA in Portugal to the French firm, Vinci.⁸

2.4.2. CANADIAN COMMERCIAL AIRPORT PRIVATIZATION

The Canadian Air Transportation Administration (CATA) of the Department of Transport (later renamed Transport Canada) owned and managed most airports and air navigation facilities in Canada until the early 1990s. Many of those airports had been originally established by municipalities but later transferred to the federal government, or were developed by Transport Canada in the late 1950s to replace earlier aerodromes: an example of the former is Calgary (YYC), while Halifax (YHZ) illustrates the latter.

The Government of Canada undertook its first review of the potential for future ownership and operation of its airports in the mid-1970's. The first report of the "Transport Canada Task Force on Airport Management" (also known as the "Hagglund Report") was published in July 1979 and found that:

"... (the future direction for airport governance and operation) is clearly related to the corporate structure for airport management, i.e. the form of organization, and that management of a commercial-type activity should not be embedded in a government department. An ancillary issue ... relates to the provision of the requisite financial incentives and opportunities ... at each principal airport, to enable (them) to be operated as a financially self-sustaining entity."⁹

After many years of subsequent deliberation, numerous reports, changes of government and changing economic landscape, the basic conclusions of the Task Force remained true: a new ownership and operating structure was required to deliver the benefits that airports could provide in terms of enhanced customer service, reduced pressure on government expenditures and as economic enablers of the general economy.

In 1992 the Canadian government started to devolve the operation, management, and development of airports in Canada from Transport Canada to local airport authorities (LAAs) that were set up as not-for-profit corporations. These airport authorities are fully responsible for funding all operating and infrastructure costs and must invest all profits back into the airports. As a first round of airport transfer, the federal government leased out four major airports in the summer of 1992—Calgary, Vancouver, Edmonton, and Montreal.¹⁰

In July 1994, Transport Canada announced a National Airports Policy (NAP) that grouped airports into five categories: 26 National Airports System (NAS) airports, 71 regional and local airports, 31 small airports, 13 remote airports, and 11 Arctic airports. The NAP required that ownership of regional and local airports be transferred from the federal government to regional or local interests such as provincial and local governments, airport commissions, and private businesses. The NAS airports—the 26 airports that handled more than 200,000 passengers per year or served provincial or

⁸ French group Vinci won the privatization tender for Portugal's airports operator ANA in December 2013 with a 3.08 billion euro (\$4.1 billion) bid, enabling the Portuguese government to beat its EU/IMF asset sale goal.

⁹ TC CATA Task Force on Airport Management, Volume 1 Progress Report, July 1979, Page 2

¹⁰ International Civil Aviation Organization (ICAO), Air Transport Bureau, Economic Analysis and Policy Section, "Case Study: Canada," January 9, 2013.

territorial capitals—were leased to Canadian Airport Authorities (CAAs), not-for-profit and non-share corporations similar to LAAs, which are responsible for operations, management, and capital expenditures. The government retains ownership of the airports and receives rent payments from the CAAs and LAAs.

As part of this process the assets and land associated with the Yellowknife Airport (plus a number of smaller airports serving remote communities) was transferred to the GNWT on July 1, 1995. Continuing operating subsidies were identified in the transfer agreement¹¹ although this has now been subsumed into the overall federal transfer formula for the Territory as a whole. YZF was designated as an Arctic airport (along with Whitehorse and Iqaluit) that provides access to additional financial resources from the federal government.

More generally the federal government removed operating subsidies from regional and local airports over a five-year period. In its place, an Airport Capital Assistance Program (ACAP) was established to provide federal funding for safety-related airside capital projects at these airports. Thirty of the 31 small airports have been transferred to local interests, in accordance with a NAP requirement that all small airports be transferred to local interests or closed; the holdover on this list is Penticton, BC. The government continues to support remote and Arctic airports that service isolated communities.

Except for the airports operated by or on behalf of Transport Canada, the federal government does not regulate airport charges at airports already transferred to CAAs, LAAs, or local interests. The government permits airport authorities to determine airport charges as long as they are non-discriminatory and competitive. Airports are also free to impose local passenger fees as a way to generate revenues for capital improvements or infrastructure expansions.

Canadian NAS Airport Authorities pay approximately \$300 million a year in rent to the federal government (over the first 20 years of devolution this amounted to some \$3 billion in rent payments to the federal treasury)¹² and hundreds of millions in “payments in lieu of taxes” to municipal governments across Canada. From a policy imperative of being “no worse off” from the devolution process, and from a time when the operation of TC’s airport assets required a \$400 million annual subsidy (1990 dollars) the federal government has received a general revenue windfall through those rents.

Critics of Canada’s “users pay” system question whether it has benefited aviation consumers. Some contend that these “quasi-independent” authorities, whose board members are often nominated by municipalities, often represent the interest of local stakeholders. A 2012 report prepared for the Standing Senate Committee on Transport and Communications¹³ indicated that passengers departing Canadian airports often pay 60% and 75% above the base airfare to cover taxes and charges, compared to between 10% and 18% in the United States. The Canadian Airports Council estimated that in 2011, 4.8 million Canadians chose to cross the U.S. border and fly from U.S. airports.

¹¹ Northwest Territories Arctic A Airports Transfer Agreement, 1995

¹² Based on the evidence provided to The Standing Senate Committee on Transport and Communications and reflected in the report, “ONE SIZE DOESN’T FIT ALL: The Future of Growth and Competitiveness of Canadian Air Travel” April 2013. <http://www.parl.gc.ca/content/sen/committee/411/trcm/rep/rep08apr13-e.pdf>

¹³ The Standing Senate Committee on Transport and Communications, “The Future of Canadian Air Travel: Toll Booth or Spark Plug?”, June 2012. <http://www.parl.gc.ca/content/sen/committee/411/trcm/rep/rep05jun12-e.pdf>

For example, about 85% of the annual passengers at Plattsburgh International Airport in upstate New York, near the Canadian border, are Canadian residents. A report by the Conference Board of Canada concluded that the burden of Canada's airport rents, fees, and other service charges was undermining the competitiveness of Canadian airports located near the U.S. border.¹⁴

Canada's model of airport devolution is quite unique and overall has been successful. The federal government has significantly benefitted from reductions in on-going operational subsidies and pension liabilities, reductions in calls on federal capital for essential infrastructure upgrades, and a very significant annual return on its real property holdings. Tenants (including airlines) have benefitted from the application of business approaches to decision making by authority management at the local level and the speed of decision making; passengers have enjoyed better facilities and services, albeit at a higher price; and communities have benefitted from the tangibles of greater economic development and the intangibles of more closely identifying with one of the key drivers of their local economy. Moreover, with good regulatory oversight, the airport risk profile has been reduced.

2.4.3. US AIRPORT CORPORATIZATION

Almost all commercial service airports in the United States are owned by local and state governments, or by public entities such as airport authorities or multipurpose port authorities.

In 1996, Congress established the Airport Privatization Pilot Program (APPP) to explore the prospect of privatizing publicly owned airports and using private capital to improve and develop them. In addition to reducing demand for government funds, privatization has been promoted as a way to make airports more efficient and financially viable. Importantly only General Aviation airports can be sold under the APPP: commercial airports can only be leased.

The general principles of the APPP are illustrated below contrasted to transfers outside of the program.

A recent report for the US Congress highlighted the difficulties.¹⁵ Participation in the APPP has been very limited, with only two commercial service airports completing the process. The first of these, the joint civil-military Stewart International Airport in New York State, was transferred in 2000 under a 99-year lease to the UK's National Express Group (NEG - which subsequently made a strategic withdrawal from airports and the Port Authority of New York & New Jersey reassumed control of the facility in 2007). The other is San Juan's Luis Muñoz Marín (LMM) International Airport in Puerto Rico, which is currently being operated by Aerostar, a joint venture between Mexican airport operator Grupo Aeroportuario del Sureste (ASUR), and US based infrastructure investor Highstar Capital.

The lack of interest in privatization among U.S. airports is often put down to a number of basic causes, including:

¹⁴ Driven Away: Why More Canadians are Choosing Cross Border Airports. The Conference Board of Canada, September, 2012.

¹⁵ Airport Privatization: Issues and Options for Congress, Congressional Research Service (CRS), Rachel Y. Tang, May 12, 2014, Pg. 1

- The current beneficial rates of financing available only to publicly owned airports through non-taxable (municipal) bonds;
- The presence of barriers or lack of incentives to privatize: for instance, change is needed to make the proceeds from privatization available for non-airport purposes needs (such as funding unmet pension liabilities) to be more attractive to public-sector owners;
- Vocal opposition by major stakeholder critics, including the airlines and unions, which have well funded lobby groups in support; and
- The “comfortable pew” issues ¹⁶, i.e. the current ownership structure is understood and adequately rewards its internal supporters to maintain the status quo.

¹⁶ Mr. Brian Flemming former Chairman and CEO, CATSA, in unpublished correspondence

Table 2. Full Airport Privatization Under the APPP vs. Outside the APPP¹⁷

	Full Privatization Under APPP	Full Privatization Outside APPP
Eligible Airports	A maximum of 10 airports may participate, among which only one may be large hub airport. One slot is reserved for a general aviation airport. Commercial airports may only be leased; general aviation airports may be sold.	No restrictions on number or type of airports.
Use of Sale/Lease Proceeds	Airports can request DOT approval to use sale/lease proceeds for non-airport purposes. For commercial service airports, this also requires consent of 65% of airlines. For general aviation airports, this requires consultation with owners of aircraft based at the airport.	Sale/lease proceeds are considered airport revenue and must be used for airport purposes.
Grant Repayment	DOT may grant exemptions from existing repayment obligations. Airports must abide by other grant assurance obligations.	DOT cannot grant exemptions from grant assurance obligations or existing repayment obligations.
AIP Formula Grants	Private operator is eligible for grants from AIP formula funds, but at a lower federal share.	Private operator may be eligible for grants from AIP formula funds under certain conditions, such as when a privately owned airport is used for public purpose as a reliever or provides at least 2,500 passenger boardings a year.
Rates or Charges on Airlines	Rates on airlines may not rise faster than the inflation rate without consent of 65% of airlines. Rate increases for general aviation aircraft owners may not exceed percentage rate increase for airlines.	Rates and charges must be reasonable and not unjustly discriminatory, pursuant to grant assurances.
Charges on Passengers	Private operator is authorized to impose, collect, and use revenue from passenger facility charges (PFCs).	Private operator is authorized to impose charges on passengers (subject to reasonableness and non-discrimination requirements of the grant assurances) but not to impose, collect, or use PFCs.

Moreover, with the majority of airports being owned at the municipal or state (provincial/territorial) level the negotiations to develop acceptable solutions have fallen afoul of the complexities of the adversarial system of government in the USA and other vested interests.

But the primary barrier has been the access to the tax-friendly debt issued by state and municipal governments in the United States, which has tended to suppress the other

¹⁷ US Federal Aviation Administration 1996 & 2012 Reauthorization Act, Title 49 United States Code §47134, Airport Privatization Pilot Program

benefits of privatization. Without equal treatment for private sector operators the barriers to transfer will remain significant.

The financial implications for the three commercial airports that submitted a final application to the APPP are illustrated below.

Table 3. Financial Structure for the Lease Payment and Financing of Selected U.S. Airports¹⁸

Year	Airport sponsor	Airport	Up-front lease payment	Financing structure
2000	New York State DOT	Stewart	\$35 million	Funds from private sector operator and revolving credit
2008 (proposed)	City of Chicago	Midway	\$2.521 billion	\$500 million to \$1 billion in equity (20 to 40 percent), remainder from either additional equity or loans (80 to 60 percent)
2013	Puerto Rico Ports Authority	Luis Munoz Marin	\$615 million	\$350 million from debt financing of investment grade bonds (57 percent), \$265 million from equity (43 percent)

Source: GAO Summary of FAA Docket Information|GAO-15-42

The two most recent attempts to privatize airports in the United States (one successful and one not) are illustrative of the issues to wide-ranging privatization in the US.

Luis Muñoz Marín International Airport (LMM), San Juan, Puerto Rico.

The airport owner started the process in December 2008. A RFQ was issued to solicit interest from private sector investors in July 2011 with final transfer taking place in February 2013¹⁹. The Aerostar joint venture was selected as the preferred bidder for the LMM International Airport concession in June 2012 over a rival joint bid from Macquarie and Ferrovial. Financial Close of the transfer under the APPP to operate, maintain, and improve LMM – the busiest hub in the Caribbean - took a further eight months. The time taken reflects the considerable regulatory complexity involved, as the FAA, the Puerto Rico Public-Private Partnerships Authority (PPPA), the Puerto Rico Ports Authority (PRPA), and the City of San Juan all had to sign off on the project before it could achieve commercial close. Under the terms of its concession, Aerostar was required to make an upfront payment of USD615 Million to the PRPA, and the new operator was to also pay an annual fee over the 40-year life of the concession. That fee starts at USD2.5m for the first five years, rises to 5% of airport's gross revenues for the next 25 years, and finally climbs to 10% of the revenues in the final decade of the agreement. The bulk of Aerostar's upfront payment was used to redeem about USD400m of various public loans and bonds that were secured against the airport's revenues (many of them inter-governmental arrangements involving the Government Development Bank for Puerto Rico) and which had to be redeemed before

¹⁸ Airport Privatization: Limited Interest Despite FAA's Airport Pilot Program GAO-15-42 (Nov 2014)

¹⁹ Airport Privatization: Limited Interest Despite FAA's Airport Pilot Program GAO-15-42 (Nov 2014)

any other party could secure a priority claim on the cash stream. Aerostar financed its initial payment from a combination of a USD327 Million equity contribution from its two sponsors and a USD350 Million private placement. The 22-year bond, on which Aerostar's financial advisers UBS and RBC Capital Markets acted as the placement agents, secured an investment grade (Baa3) rating from Moody's and ultimately sold to 15 US insurance companies. Strong demand for the paper saw the order book oversubscribed by a factor of three and enabled the issuer to reduce the coupon on the bond from an initial target of 6% to 5.75%. Both investors and rating agency indicated their confidence in the sponsors' track record and their plans to develop LMM.

Midway Airport, Chicago²⁰

The APPP slot reserved for the large hub commercial airport used to transfer LMM under the program had been reserved by the FAA at the request of the City of Chicago for Midway Airport but its privatization efforts failed twice. However and significantly, the City of Chicago received airline approval to lease the airport to private investors under the APPP, the first time this had been achieved. In October 2006 the FAA authorized the City to select a private operator, negotiate an agreement, and submit a final application under the pilot program.

Two years later in October 2008, the Chicago City Council agreed to a \$2.52 billion, 99-year lease with Midway Investment and Development Corporation (MIDCo), a consortium led by Citigroup, Inc., John Hancock Life Insurance Co., and YVR Airport Services. The deal was delayed due to the inability of the consortium to secure financing in the credit market during the height of the global economic crisis. The lease agreement was terminated when the group missed the April 6, 2009 payment deadline. MIDCo forfeited a \$126 million surety to the City. A renewed effort to lease Midway in 2012 – this time for 40 years – resulted in six international consortia being qualified through an RFQ process. There were: AMP Capital Investors Limited – an active manager and investor in airports worldwide, its portfolio including Melbourne in Australia and Newcastle in the UK; Corporación América Group – an Argentina-based airport operator with 49 airports in seven countries; Global Infrastructure Partners (GIP) – the controlling investor and active manager of London City, Gatwick and Edinburgh airports in the UK; Great Lakes Airport Alliance – a partnership of Macquarie Infrastructure and Real Assets (MIRA), and Ferrovial, whose airport assets include London Heathrow, Brussels and Copenhagen; a joint venture between global airport operator, Incheon International Airport, and Hastings Funds Management; and a joint venture between Industry Funds Management and Manchester Airport Group (MAG), the latter boasting interests in 13 airports across the globe that include Brisbane and Melbourne in Australia and Manchester and East Midlands in the UK.

The process was abandoned a year later after one of the final two bidding groups – Industry Funds Management (IFM) and Manchester Airports Group – walked away from the process. Despite indications from the remaining bidder group, Ferrovial and Macquarie, that they intended to submit a financed offer with a present value of over USD 2 Billion, the City suspended plans to lease the airport and in September 2013 withdrew its preliminary privatization application.

²⁰ Airport Privatization: Limited Interest Despite FAA's Airport Pilot Program GAO-15-42 (Nov 2014)

3. EXTERNAL ENVIRONMENT

3.1. POLITICAL CONTEXT²¹

NWT has a land area of 1,183,085 km² and a population of 43,300 in 2012 as compared to 37,360 in 2001²². As of 2010 there were 33 official communities in the NWT. These range in size from 18,700 inhabitants (Yellowknife) to 52 inhabitants (Kakisa's).

There are no political parties in NWT. The Legislative Assembly consists of 19 members, elected by constituencies. The average riding has 2,300 residents. Following an election, members choose from amongst themselves one person to serve as Speaker and another as Premier, and six more to serve as Cabinet ministers, to whom the Premier assigns departmental responsibilities. Some Members choose not to accept nominations to Cabinet because they prefer to be free to ask questions of ministers in the House and before standing committees and feel they can better represent their constituents as Regular Members. It rarely happens, but the Premier and/or Cabinet ministers can be removed by passing a motion of non-confidence in the House. Motions of censure are a less extreme measure that can put a Premier or minister under considerable public pressure. The Commissioner, appointed by the Minister of Aboriginal Affairs and Northern Development, plays a role akin to that of a provincial Lieutenant Governor, although not a representative of the Crown. Mr. Bob McLeod in serving his first term as Premier of the Northwest Territories.

While the Legislative Assembly of the NWT acts, for the most part, as a provincial legislature would, it does not have the same level of control. Only the federal government, for example, can amend the NWT Act. The NWT also relies heavily on federal transfers. In 2012–13 federal transfers accounted for 73 per cent of the territorial government's revenue, second only to Nunavut (82 per cent) and similar to the Yukon (72 per cent). For comparison, during the same year, federal transfers accounted for 34 per cent of PEI's revenue, making it the province relying the most on the federal government, but still far less dependent than the territories.

The governments of Northwest Territories operate according to a consensus system of democracy. Decisions are made by consensus of those present, rather than by the more adversarial and competitive process that is common in other Canadian jurisdictions where party politics are prevalent.

The politics of NWT involves not only the governance of the NWT but also the social, economic and political issues specific to the territory. This includes matters relating to local governance and governance by the federal Government of Canada, the engagement of the aboriginal population in territorial affairs, and the matter of official languages for the territory.

The specific governance of each community differs: some are run by various types of First Nations community organizations, while others are designated as cities, towns,

²¹ Wikipedia, Northwest Territories (https://en.wikipedia.org/wiki/Northwest_Territories); Historica Canada, The Canadian Encyclopedia, Northwest Territories (<http://www.thecanadianencyclopedia.ca/en/article/northwest-territories/>); Legislative Assembly of the Northwest Territories, What is consensus government (<http://www.assembly.gov.nt.ca/visitors/what-consensus>).

²² Statistics Canada, 2012; Statistics Canada notes that this increase in population is likely due to improved information gathering for NWT, rather than actual population growth.

villages or hamlets, though most communities are municipal corporations. Comparatively, Yellowknife is the largest community and has the largest number of Aboriginal people (4,105 (or 22.2% of total population)); Behchoko, with a population of 1,894, is the largest First Nations community (1,730 (91.5%)); and Inuvik, with 3,484 people, is the largest Inuvialuit community (1,335 (38.9%)). There is one reserve in the NWT, the Hay River Reserve, which is located on the south shore of the Hay River. Yellowknife's municipal government is made up of a mayor and eight councillors elected for three-year terms. Council's responsibility includes planning and zoning, land development, property taxes, transportation, parks and recreation, water, sewage and garbage disposal.

On April 1, 2014, the Northwest Territories became the second territory to take over land and resources responsibilities as the *Northwest Territories Devolution Act* came into effect. On that date 132 employees were transferred from the federal government to the GNWT. Under the Agreement, the federal government increased the amount the GNWT can receive through the existing Territorial Formula Financing Grant (TFFG) by \$65.3 million per year for the costs of providing services related to its new responsibilities. The Agreement also gave the GNWT a one-time payment of \$26.5 million (disbursed over a number of years) to help carry out its new responsibilities. An Order in Council, approximately one year after Royal Assent (Spring 2015), brought into force provisions that restructure the land and water boards in the Mackenzie Valley. As well, provisions to allow for regional studies and regulation-making authorities for consultation and cost recovery came into force. An Order in Council, anticipated approximately two years after Royal Assent (Spring 2016), will bring into force enforceable development certificates and an administrative monetary penalties regime. Finally, the parties committed to continuing devolution negotiation regarding offshore resources.

With a population and economy the size of the NWT, it is natural that the members of the legislature are very visible and most acutely feel the need to demonstrate progress for their constituents. Thus it is understood any discussion of the Yellowknife Airport must be viewed through at least two important political lens: a strategic asset for the entire NWT and a source of competition for more remote communities to access capital funds.

3.2. SOCIAL CONTEXT²³

Yellowknife is the territorial capital and the largest community in the Northwest Territories, and is the government and service centre for the territory and much of the central Arctic. It is also the economic hub for mining and tourism activity. With the potential opening of the Northwest Passage, the prospects for additional air lift requirements for people and cargo in the medium to long term are positive.

The Northwest Territories is made up of small remote communities along with larger, increasingly urban communities that serve as government, business and industry and education centres. The most populous of the small urban centres in the Northwest Territories are located in the Mackenzie Valley area, with Yellowknife being the largest city. It began as a gold mining centre and became the territorial capital in 1967. While most of the settlements in the NWT are significantly smaller than Yellowknife, they are

²³ Historica Canada, The Canadian Encyclopedia, Northwest Territories, <http://www.thecanadianencyclopedia.ca/en/article/northwest-territories/>

important for various reasons. Fort Smith, for example, was the major administrative centre prior to Yellowknife becoming the capital, and remains central to the region. Hay River is a transportation and fishing centre. Behchokò is the largest Dene community in the NWT, while Inuvik is the major administrative and transportation centre for the western Arctic. Fort Simpson, once the centre of the fur trade, is located at the confluence of the Liard and Mackenzie rivers.

Its people are very much connected to their traditions through essential relationships with the land, animals and each other. Aboriginal peoples in the NWT have strong interests in maintaining their cultures and preserving their heritage. Aboriginal cultural institutes have been established in several communities, and many others have initiated programs to record the knowledge of elders, to teach children traditional skills and to maintain their languages. Music and art festivals are becoming increasingly popular in many parts of the NWT. Many community museums, historical societies and heritage groups operate within the NWT.

The cultural identities of the Dene, Métis and Inuvialuit remain strong. A smaller proportion of the population is non-Aboriginal in the smaller communities, while in the larger regional centers the non-Aboriginal proportion of the population is on the rise. In Yellowknife, non-Aboriginal residents make up the majority of residents and there is a growing immigrant population. While the larger communities contain the most residents, the smaller communities and their people remain central to defining the NWT. Many of the people living in smaller communities continue to earn at least part of their living by hunting, trapping and fishing. In 2008, 39 per cent of people over the age of 15 hunted or fished in the NWT, including 45 per cent of the Aboriginal population. Six per cent participated in trapping. In addition to the fur value obtained from hunting (\$830,900 in 2009), meat is a major item in the local diet. Since 1974 the territorial government assists those wishing to make a living off the land through various harvest assistance programs.

The NWT has a relatively young, male-dominated population. Its population is mobile, with potential for significant outmigration from small, remote communities. According to the Arctic Social Indicators, the life expectancy of NWT residents is four years less than nationwide.²⁴ The birth rate remains one of the highest in Canada, however (about 1.97 children per woman), which creates pressure for employment. Per capita household income varies greatly. ASI identifies wide variations between communities (\$13,009 in Gamèti; \$43,642 in Norman Wells). Yellowknife average household income is double the national average but it also spends 50% more than the average Canadian home.

About 64% of NWT residents have completed high school. Amongst the Aboriginal population, this figure is lower. Economic activity in different areas of the Territory has meant that unemployment rate has gone down but varies greatly from community to community.

3.3. ECONOMIC CONTEXT

The NWT is a land of remarkable beauty, tremendous economic opportunity and the site of intense economic activity, where investors have capitalized on opportunities and a

²⁴ Joan Nymand Larsen et co. Arctic Social Indicators – ASI II: Implementation, 2014 p. 102.

rich and diversified resource base. Primary resource extraction is the foundation of the NWT economy. Since the 1930s, minerals have become the most important economic base for the NWT, with all other economic activities except the service industry far behind. Furs, the original base, are now of much less importance. Commercial whaling disappeared early in the 20th century.

The NWT's expanding industrial sectors include diamond mining, oil and gas industries, the production and sale of energy, a superior fur trade, planned pipeline construction and a significant tourism industry. In the new post-devolution environment, the GNWT has greater ownership and authority to promote the potential of the NWT's resource sector, tourism as well as its growing communications, transportation and energy infrastructure needs.

Because of its small total population and internal demand, external policy and economic conditions have significant impact on NWT's growth rate. Growth has been erratic since 1966, reflecting the administrative transfer from Ottawa to Yellowknife, the ceding of territory for the creation of Nunavut in 1999 and the fluctuating interest in mineral resource development.

In 2013, there were about 22,500 employed people in the NWT (8.2% unemployment), most whom (82.6%) had jobs in the service sector. These include: public administration (23.5% per cent), business, finance and administration (21%), trades, transport, equipment (15%), management (10%), and health services (9 per cent). Within the goods producing sector, construction (8.4%) and mining (6%) were the largest employers. It is projected that within the next six years one in every three new jobs created will be in trades, transport and equipment operator occupations, and that one in every five new jobs will be in business, finance and administrative occupations.²⁵

Economic Environment²⁶

The Conference Board of Canada forecasts that overall, the Northwest Territories, Yukon and Nunavut are poised to generate GDP growth of 5.4% in 2015 and 2.4% in 2016. The Conference Board goes on to say that:

"... while the current financing environment is not conducive to rapid expansion of mining projects in the territories, prospects for the medium to long-term are generally positive"²⁷.

The same Conference Board news release states that:

"... construction work on several new mines and public investment, as well as growth in wholesale and retail trade and financial services should drive growth in real GDP growth in the NWT from 1.4% in 2014 to 3.6% in 2015. Stronger diamond production will help the NWT economy but prospects for more work on the Canol shale oil play have dimmed due to an exploration hiatus this winter."

²⁵ <http://www.ece.gov.nt.ca/files/pages/422/lmr12-14-websiteversion.pdf>

²⁶ Government of Canada, The Canadian Trade Commissioner Service, Northwest Territories, <http://www.international.gc.ca/investors-investisseurs/cities-villes/north-nord/territories-territoires.aspx?lang=eng>

²⁷ Source: Conference Board of Canada, News Release 14-51

In a separate report co-authored by the Conference Board it states:

“... as the economy in the north grows, so too will demand for air services.”²⁸

Diamond Industry²⁹

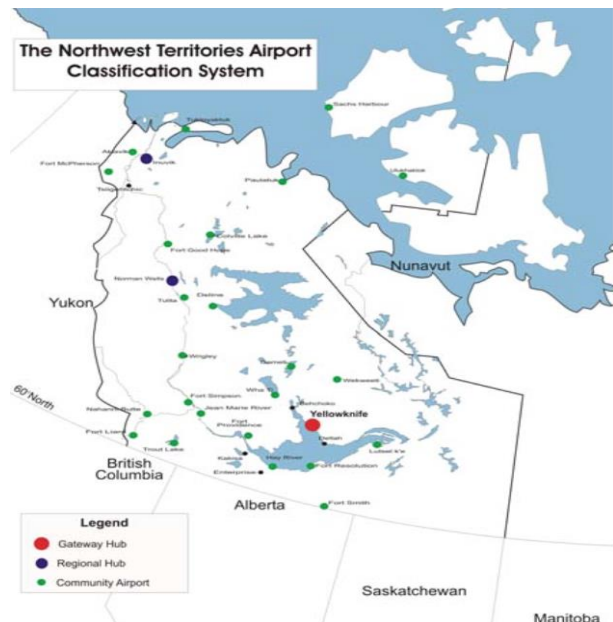
The total value of mineral production in the NWT grew to over \$2 billion in 2010 from about \$6.8 million in 2000, a nearly 200 per cent increase. Two of the diamond-producing mines opened during this 10-year period, accounting in large part for the increase in production value. The abundance of diamonds in this Territory makes it the third largest producer of rough-cut diamonds in the world, an industry worth \$1.7 billion. The GNWT committed its support to the industry and its pursuit to authenticate NWT diamonds mined, cut and polished in the NWT. This includes the Approved NWT Diamond Manufacturer certification and the GNWT Diamond Certification Program.

Resources Sector³⁰

NWT is a land rich in mineral resource potential. One of the priorities of the 17th Legislative Assembly is strengthening and diversifying the economy in an environmentally sustainable way. It has vast undeveloped oil and gas reserves. It is estimated that the NWT could hold as much as 37 percent of Canada's marketable light crude oil resources and 35 percent of its marketable natural gas resources.

Tourism³¹

Global, national and territorial forecasts indicate that the tourism economy is growing. In fiscal year 2012/2013 visitor spending in the Northwest Territories was \$106.7 million, an increase of six per cent over the previous year. Tourism is an important component of the territorial economy with each region offering unique visitor experiences and in turn economic opportunities for communities. The new tourism plan provides GNWT with direction to build on previous tourism investments made over the last five years under *Tourism 2015*. NWT Tourism promotes the NWT as a "spectacular" world-class tourist destination and has as its goal to increase the value of the tourism industry to \$130 million by 2015/2016.



²⁸ Source: *The Economic Impact of the Canadian Air Transportation Industry in Canada*, April 2013, SNC-Lavalin Inc. and the Conference Board of Canada

²⁹ Historica Canada, *The Canadian Encyclopedia*, Northwest Territories, <http://www.thecanadianencyclopedia.ca/en/article/northwest-territories/>; GNWT, Industry, Tourism and Investment, Diamond Industry, <http://www.iti.gov.nt.ca/infopage/diamond-manufacturing>.

³⁰ GNWT, Industry, Tourism and Investment, About Oil and Gas, <http://www.iti.gov.nt.ca/sectors/oil-gas> & <http://www.iti.gov.nt.ca/news/resource-potential-highlighted-offshore-technology-conference>.

³¹ GNWT, Industry, Tourism and Investment, Tourism, <http://www.iti.gov.nt.ca/sectors/tourism> & <http://www.iti.gov.nt.ca/content/tourism-2015>.

Arts and Crafts³²

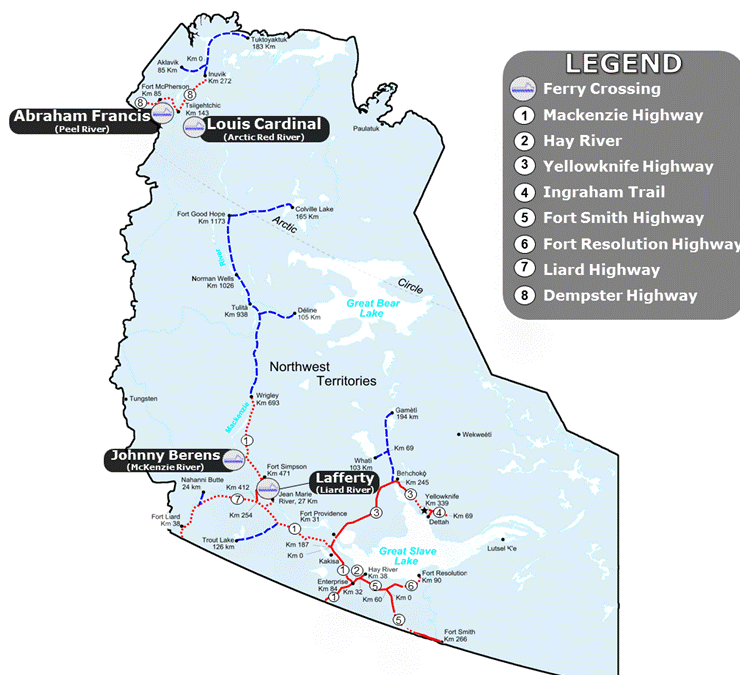
Inuit prints and sculpture have established an international reputation and are a major source of employment. In 2008, about nine per cent of the population over the age of 15 produced arts and crafts, including large percentages of the population of the small Aboriginal communities of Kakisa and Trout River (about 40 per cent and 48 per cent, respectively).

3.4. REGIONAL TRANSPORTATION SYSTEM

The Yellowknife Region is well served by all modes of transportation:

Air: There are 44 airports in the Northwest Territories (excludes heliports)³³. Nineteen (19) of these are certified aerodromes – a requirement for scheduled air service - and 25 are registered. The GNWT owns and operates 26 of the airports in the Territory. There are only three airports that provide customs services (Yellowknife, Tuktoyaktuk, and Inuvik).

The number of passengers getting on/off aircraft as a proportion of the city's population is much higher in Iqaluit and Yellowknife than in cities where other modes of transport are readily available³⁴.



Rail: Rail lines in the NWT, as in the rest of Canada's Arctic are scarce, due largely to the small, widely dispersed population coupled with the climate that impacts the efficiency of the rail infrastructure. Of the three northern territories, only the NWT has operating rail lines accounting for about 0.2% of the total rail lines in Canada³⁵. Hay River is home to the only rail line in the NWT, formally known as the Mackenzie Northern Railway. The 585 km line connects to Peace River, AB, and High

Level (at the 310 km mark). CN operates one train North into Hay River six days a week, and one train back South.

³² Historica Canada, The Canadian Encyclopedia, Northwest Territories, <http://www.thecanadianencyclopedia.ca/en/article/northwest-territories/>.

³³ Source: Canada Flight Supplement effective to 25 June 2015

³⁴ Statistics Canada "Transportation in the North", catalogues 16-002-X, Table 4 Propensity to travel by airplane 2006

³⁵ Statistics Canada "Percentage distribution of Canada's rail network by province and territory, 2007", CANSIM Table 404-0011

Highways: There are eight highways in the NWT; a mix of paved and gravel. The longest highway is Highway 1 Mackenzie Highway which starts at the NWT/AB border and continues approximately 690 km to Wrigley. The graphic below shows the NWT highway system, including paved highways (solid red lines), gravel highways (dotted red lines), and winter roads (dotted blue lines).

Vehicle gasoline (unleaded, gas and propane) are available in most communities along the highway system, with repair facilities in larger towns; however distances between these services may be significant and hours of operation may be limited.

Winter Roads and Ice Bridges: Winter access roads are open from about mid-December, to late March, but may vary with weather conditions and locations. Some of the winter roads are privately operated and maintained, offering no services (emergency or otherwise) and are used at the traveller's own risk.

Ice bridges provide safe crossing in the winter. Crossing service (ice bridges &/or ferry service) may be interrupted for several weeks at a time however when the river ice breaks up and in the fall at freeze-up.

Ferries:

In the summer, free ferry services are provided at four river crossings: Fort Simpson (Liard River, Hwy 1, "Lafferty"); Ndulee (Mackenzie River, Highway 1, "Johnny Berens"); Peel River, (Highway 8, "Abraham Francis"); and Tsiigehtchic (Mackenzie River, Highway 8, "Louis Cardinal").

3.5. AVIATION INDUSTRY TRENDS

Overview

Air transportation is critical to economic development generally, and North of 60 in particular, and northern airports play a key role in enabling economic activity through natural resource exploration and exploitation. Air transportation is heavily relied on for passenger and cargo transportation given the considerable distance between communities.

Airline Industry

The airline industry internationally and domestically has recently experienced a significant period of growth and positive earnings based on critical industry consolidation and cost cutting. Most recently, the falling price of fuel has very positively affected the airlines' bottom lines.

While Canada's two mainline airlines – WestJet (WS) and Air Canada (AC) – have both experienced those overall positive benefits, the financial performance of Canada's regional and northern airlines is not as solid.

While the arrival of AC & WS into YZF has brought many benefits to Yellowknife and the territorial economy, it has not been without cost: while consumers enjoy very much lower flight costs going south than heretofore, and more seamless access to destinations beyond, it has meant that the economics of serving more remote and northern communities has lost the benefit of an implicit cross-subsidization of these "thinner"

routes. This led in part to recent (but ultimately unsuccessful) talks between First Air and Canadian North to merge. The two Inuit-owned companies had announced in April 2014 they were in discussions to merge the airlines. At that time they said a merger would improve the "sustainability" of their operations.³⁶

The arrival of the major airlines and the continuing viability of the northern airlines will put pressure on YZF to contain costs, particularly those that are directly levied under airline use and lease agreements, including operating fees and charges.

Airports

A recent industry wide study³⁷ (prepared previously by team members) notes that air transportation has value beyond just the cumulative amount of economic output produced by the industry. Air transportation and airports:

- **Are Vital to the Livelihood of Canadians in Remote Regions.** During times when winter roads are not available, air transportation is the only way in and out of many remote communities. Northerners depend on air transportation for the delivery of necessities such as food products and access to emergency care.
- **Promote the Economic Growth of Canada's North.** Mining is one of the most important economic drivers in Canada's north and its importance is expected to increase with climate change. Air transportation is essential for delivering oversized cargo to remote mining and exploration sites, and for the movement of large crew and supplies. As the economy in the north grows, so too will demand for air services.
- **Help Protect the Country's Natural Resources.** Provincial and territorial governments attempt to minimize the number of forestry resources destroyed by forest fires, and rely heavily on air transportation to move fire crews, equipment, fuel and supplies. They also use specialized aircraft to suppress forest fires.
- **Are Necessary for Emergency Response and Humanitarian Relief.** Air transportation plays a critical role in supporting the movement of specialized emergency personnel, equipment and supplies be they involved in police, military, health care, search and rescue, or hydro maintenance activities. Climate changes will likely increase the severity and frequency of incidents requiring this type of airborne response.
- **Broaden People's Leisure and Cultural Experiences, and Keep Families Connected.** Historically, air transportation has provided a wider choice of vacation destinations and has made them more accessible and affordable to ordinary Canadians. Moreover, with an ever more mobile work force, particularly in Canada's developing regions, air transportation provides that essential link to "down home".
- **Enhance Business Operations and Efficiency.** Air transportation allows firms to shorten delivery times, minimize inventory costs and limit interruptions to

³⁶ CBC News Report, October 24th 2014

³⁷ *The Economic Impact of the Air Transportation Industry in Canada*, April 2013, SNC-Lavalin Inc. and the Conference Board of Canada

production. It allows workers to move to areas where their skills are best utilized, benefiting themselves and Canada as a whole. It also allows firms to develop natural resources in isolated areas using air transport to fly-in workers on rotational shifts.

Other industry-wide longitudinal studies³⁸ note that:

- Airports contribute to the ongoing viability of the communities they serve, particularly isolated communities.
- Successful airports have a healthy income statement and respond effectively to the needs of their community.
- Smaller airports are looking for creative ways to increase non-aeronautical revenue, such as leasing or selling under-utilized land for light industrial, agricultural or recreational uses.
- Regulatory increases and changes are having a significant and negative impact on smaller airports (e.g., safety management systems, airport security programs, installation of new baggage screening / explosive detection systems, etc.).
- Airports smaller than YZF are struggling financially.

The referenced *2006 Study of Municipal Airports in Ontario*³⁹ (prepared previously by team members) concluded that successful airports:

- Are active promoters of the airport;
- Have achieved high awareness within the community (general population and municipality);
- Are customer service oriented;
- Are well connected with economic development plans and activities within their communities;
- Generate sufficient revenues to cover operations and capital rehabilitation;
- Balance revenues between aeronautical and commercial sources;
- Look for creative ways to generate revenues from under-utilized lands;
- Have a sufficient population and industrial / economic base to support airport operations;
- Take a partnership approach to developing infrastructure projects; and
- Are persistent.

³⁸ Such as the *Municipal Airports in Ontario* study, 2006, Jacobs Consultancy

³⁹ Ibid

3.6. POLICY ENVIRONMENT

General Legislative, Regulatory and Policy Issues

It is worth noting that pursuant to the NWT *Financial Administration Act* legislative authorization is required to set up a government corporation⁴⁰ or a revolving fund.⁴¹

Consequently, to establish a government corporation to run the Yellowknife airport legislative authorization would be required either in the form of a special act to establish the corporation or to authorize the incorporation of a business corporation under the relevant business corporations statute.

In the same way, a legislative authorization would be required to establish a Yellowknife Airport Revolving Fund to support the establishment of a Special Operating Entity for the Yellowknife Airport.

Aviation Legislative, Regulatory and Policy Issues

Within the NWT, action by the executive and legislature would be required to amend the governance of the airport.

The Canadian Transport Act (CTA) Review is the most wide-ranging federal initiative currently that could affect the NWT Airport System. The CTA is the federal framework legislation for Canada's transportation system and for the Canadian Transportation Agency's role in the administration of several parts of the Act. The CTA sets out the National Transportation Policy, which emphasizes that transportation services will be based on competition and market forces. The Policy states that government regulation and intervention should generally be limited to cases where the market cannot otherwise achieve satisfactory economic, safety, security, environmental and social outcomes. On June 25, 2014, the federal Minister of Transport launched the Review of the CTA as mandated by the legislation; the Review is scheduled to be completed before the end of 2015. The mandate for the Review also includes any other Act of Parliament that pertains to the economic regulation of transportation, for example, the *Canada Marine Act*.⁴² It is worth noting that, as yet, there is no Canada Airports Act, although there have been at least two substantive attempts in the past 10 years to address that gap.

As part of the Review, The Panel visited Yellowknife on June 2nd, 2015 and met with a number of stakeholders, including representatives of GNWT, including the DoT and Industry, Trade & Investment. There were a number of points made which impacted on aviation in the GNWT in general, including Yellowknife. Notes from the Panel's meeting in Yellowknife included, but were not limited to, the following:⁴³

"Strengthening Our Connections

- *There is a troubling lack of paved runways across all three northern territories, with only ten in total. This limits the capacity of runways, meaning that large aircraft only have a small number of markets they can access in the north.*

⁴⁰ S. 76 of the *Financial Administration Act*, R.S.N.W.T. 1988, c.F-4

⁴¹ S. 59 of the *Financial Administration Act*, R.S.N.W.T. 1988, c.F-4

⁴² <http://www.tc.gc.ca/eng/ctareview2014/discussion-paper.html>

⁴³ CTA Review Panel Notes, GNWT, June 5th, 2015 (provided by Director, Airports Div, GNWT)

Boosting air infrastructure capacity should be a cornerstone of the future of northern transportation.

- *Cargo aircraft necessary for large resource development projects can't safely land with the quality of existing infrastructure in most places in the north. This effects economic growth for the NWT.*
- *There is still a need for the Federal government to fulfill its recommendations identified under One Size Doesn't Fit All: The Future Growth and Competitiveness of Canadian Air Travel published by Canada in 2013.*
- *Most of the improvements to air infrastructure have been focused in smaller communities but larger airports remain stranded.*
- *While a user-pay, non-subsidized system for air transportation may work in southern Canada where effective road and rail systems already exist, in the north, it is different. The NWT has limited road and rail access, making air transport fundamental. Therefore, it should be subsidized.*
- *Without the necessary infrastructure, you won't have affordable airfare for residents. The quality of infrastructure contributed to how much an airline has to spend on fixing its aircraft.*
- *High airfare is an impediment to population and economic growth through major northern industries such as tourism. If fares are lower, more people are willing to travel in the territory and boost businesses like hotels.*
- *Airfare to Yellowknife is competitive with southern prices, however the prices of flying between northern communities is unacceptable. There needs to be a way to ensure that remote communities with finite options for air travel don't feel undervalued.*
- *While infrastructure improvements will help keep costs of fares low to the public, it will not substantially aid airlines. Subsidies should be considered for northern operators.*
- *The Nutrition North subsidy program should be reexamined to provide subsidies to northern airlines in delivering food to communities. Currently, subsidies are provided directly to registered northern retailers."*

The panel is still conducting its research as of the writing of this report.

YZF has a Transport Canada approved Airport Operations Manual (AOM) which covers off its regulatory due diligence. The Airports Division at Headquarters is responsible for maintaining the AOM.

In the past decade, certified airports and their customers have been faced with considerable regulatory change; sometimes resulting in additional cost. Examples of regulatory requirements that currently affect the operations at YZF or may affect them in the future include:

Emergency Planning. The requirements for airports to develop and implement an Airport Emergency Plan are defined in the Canadian Aviation Regulations (CARs), Part III, Subpart 2, Division II (CARs 302.2). As a certified airport, a TC approved emergency

plan is required at YZF, including defined roles and responsibilities, identification of potential emergencies at the airport, and how each will be addressed including response, communication, alerts, reporting, etc., testing of the plan, and review and update of the plan. YZF has an approved Emergency Management Plan in place.

Emergency Response Services. The requirements for airports to provide aircraft rescue and fire fighting (ARFF) services (also known as ERS), are defined in CARs 303. As YZF processes more than 180,000 enplaned and deplaned passengers a year, it is subject to CARs 303, and needs to provide its own ARFF services. YZF is in conformance with CARs 303 and maintains a Category 6 service.

Safety Management System. In 2008, the Federal Government implemented regulatory amendments introducing the requirement for certified airports to develop and implement a Safety Management System (SMS) using a phased approach. The requirements are defined in CARs 302.05. As a certified airport, an SMS is required at YZF. This entails the development of a TC approved SMS Manual including defined roles and responsibilities, processes for incident, accident and hazard reporting, risk analysis, corrective action, and quality assurance.

The Deputy Minister, Transportation is the Accountable Executive, and the HQ Director, Airports is the person responsible for managing the SMS for all the GNWT Airport System (centrally). Commendably, all four phases of the SMS documentation have been approved by Transport Canada.

Runway End Safety Areas. TP312 – Aerodrome Standards and Recommended Practices, 4th Edition, recommends that a runway end safety area (RESA) “extend from the end of a runway strip for as great a distance as practicable, but at least 90 m”. TP312 is currently being revised to address: provision of additional visual aids for pilots to help assess landing distances; harmonization of Canadian and International Runway End Safety Area (RESA) standards; and recognition of the engineered material arresting system (EMAS) as an additional measure to increase safety. Transport Canada has tabled Notices of Proposed Amendment (NPA) to the CARs to adopt (i.e., make mandatory) a 150 m minimum RESA requirement for certified Canadian airports with a runway greater than 1,200 m that is used by aircraft of more than 9 passenger seats. While this is on airport management’s radar, there has been no activity to-date, and it is unlikely there will be changes absent a change in the CARs or TP312. TP312 5th Edition, current in draft form, indicates that RESAs will be required. However, airports located north of the 60th degree parallel that only serve air carrier operations utilizing aircraft with less than 31 passenger seats, are exempt.

Wildlife Management. The requirements for airports to develop and implement a Wildlife Management Plan are defined in CARs 302.3. A TC approved wildlife management plan is required at airports that within the previous calendar year have had 2,800 movements of commercial passenger carrying aircraft; that are located within a built-up area; that have a waste disposal facility within 15 km of the geometric centre of the airport; that have had an incident where a turbine-powered aircraft collided with wildlife other than a bird and suffered damage, collided with more than one bird or ingested a bird through an engine; or where the presence of wildlife hazards has been observed in an airport flight pattern or movement area. YZF has an approved Wildlife Management Plan in place.

Winter Plan of Operations. The requirements for airports to develop and implement a Winter Plan of Operations as part of its Airport Operations Manual are defined by TP14371. YZF has an approved Winter Plan of Operations in place.

Runway Surface Condition Reporting. In September 2012, Transport Canada issued Advisory Circular AC 300-005 announcing a new internet based process for delivering Aircraft Movement Surface Condition Reports (AMSCRs) including the Canadian Runway Friction Index (CRFI), where it is available, into NAV CANADA's NOTAM distribution process. This NAV CANADA web based portal, called SNOWiz, is intended to accelerate the distribution of information and reduce opportunities for input errors. It will also concurrently permit airports to input information on airport lighting outages and snow accumulations off of the aircraft manoeuvring surfaces. Airports will however continue to have the option of delivering the report to NAV CANADA by telephone, fax, etc., where a computer option is not available. A new AMSCR form has been developed to match the data collection process with SNOWiz and is available to airports for current use. SNOWiz is already being used at YZF.

Applicable GNWT regulations affecting the NWT airports system include:

- **Public Airports Act** of NWT which defines: the Minister's powers; leases, licenses and other agreements and permission; regulation of commercial activity; regulation of traffic and pedestrians; disposal of property; appointment of airport managers; appointment of authorized enforcement officers; liability; offence and punishment; and applicable regulations. It is understood that the Act is currently (mid-2015) being updated.
<https://www.justice.gov.nt.ca/en/files/legislation/public-airports/public-airports.a.pdf>
- **Public Airport Fee Regulations** which outlines the aeronautical fees charged at the Yellowknife Airport, Fort Simpson, Fort Smith, Hay River, Inuvik and Norman Wells Airports. <https://www.justice.gov.nt.ca/en/files/legislation/public-airports/public-airports.r2.pdf>
- **Public Airport Traffic Regulations** which apply in respect of short term and long-term vehicle parking on the land side of a public airport in NWT. <https://www.justice.gov.nt.ca/en/files/legislation/public-airports/public-airports.r4.pdf>
- **Commissioner's Public Airport Lands Regulations** which describe the powers and duties of authorized agents with respect to commercial and industrial leases and licenses on public airport lands at 27 GNWT airports including YZF. This is further described in the "airport lands" section of this report. <https://www.justice.gov.nt.ca/en/files/legislation/public-airports/public-airports.r1.pdf>
- **Summary Convictions Procedures Regulations** flowing from the **Summary Convictions Procedures Act**, which address convictions of many types beyond the airport environment. The definition of "peace officers" is however included in these regulations and includes enforcement officers appointed under the Public Airports Act. Part 10 of the *Public Airports Act* and Division 1 of the *Public Airports Traffic Regulations* as referenced in these regulations, and define the

offences for which convictions can be made.
<https://www.justice.gov.nt.ca/en/files/legislation/summary-conviction-procedures/summary-conviction-procedures.r1.pdf>

3.7. EXTERNAL FUNDING SOURCES

Normally, NAS airports are not eligible for federal funding under the **Airports Capital Assistance (ACAP)** funding program. However, as YZF is also classified as an Arctic Airport, and it is a certified airport with year-round regularly scheduled commercial passenger service, handling more than 1,000 passengers in each of the last three years, the Airport is eligible for federal funding under the ACAP funding program.

The ACAP program allocates its funding on a priority basis: (i) safety-related airside projects such as runway, taxiway and apron rehabilitation, airfield lighting; (ii) heavy airside mobile equipment (safety related) such as snow blowers; and (iii) air terminal building / groundside (safety related) such as sprinkler systems and barrier-free access. The ACAP program does not provide funding for land purchases, feasibility, planning or zoning studies, or for projects which have already been started or completed. Funding is provided on a sliding scale depending on traffic.

For airports north of the 60th parallel, Transport Canada will contribute at least 85% of approved project costs. YZF receives 85% with the exception of fire fighting projects which are 100% funded. **Since 1998/99, the Airport has received \$6.3 million in ACAP funding** (the largest contribution was for the \$5.4M runway 15/33 (now 16/34) overlay in 2008/09). YZF has two ACAP applications currently being reviewed by Transport Canada (\$750K for a new ARFF truck, and replacement of airfield lighting on 16/34), and the airport is currently preparing an application for the overlay of runway 10/28.

The \$14B **New Building Canada Fund (NBCF)** is one component within the overall \$53B New Building Canada Plan, and it supports infrastructure projects that support projects of national, regional and local significant that promote economic growth, job creation and productivity. The NBCF has two major components: the \$4B National Infrastructure Component (NIC) and the \$10B Provincial-Territorial Infrastructure Component (PTIC) which includes \$9B for National and Regional Projects (PTIC-NRP) and \$1B for projects in communities of fewer than 100,000 residents through the small communities fund (PTIC-SCF). Under the PTIC, each province and territory will receive a base amount of \$250 million plus a per capita allocation over the 10 years of the program (based on 2011 Census figures). Unlike the 2007 Building Canada Fund, Framework Agreements with provinces and territories are not required.

Local and regional airports are included in the list of eligible projects under the NIC components; however as YZF is a NAS airport, it is ineligible for funding under the NIC. This ineligibility would not change even if the governance model at YZF changed. However, the Government of Canada states that

“... smaller NAS airports located in the Territories will nonetheless continue to be eligible to receive federal funding under the Northern Infrastructure Category of

the Provincial-Territorial Component should Territorial governments choose to prioritize airport projects for funding.”⁴⁴

For projects in the NWT, Yukon and Nunavut, the federal government will fund up to 75% of total eligible costs, including P3 projects. Projects with a for-profit private sector proponent however, the cap is 25%. Projects over \$100M are required to undergo a P3 Screen administered by PPP Canada.

⁴⁴ <http://www.infrastructure.gc.ca/plan/faq-eng.html>

4. CURRENT SITUATION AT YZF

4.1. HISTORY AND LOCATION

The Yellowknife Airport (YZF) was originally built in 1944 by Canadian Pacific Airlines, with one gravel strip. Transport Canada took over operation of the airport in 1946 and by 1954 TC had constructed two paved runways. A purpose built air terminal building (ATB) was constructed in 1963, and a new control tower was added in 1972. The terminal was enlarged in 1973, 1989, refurbished in 2006, and enlarged again in 2008 with an expansion to the departure / check-in section, bringing the terminal to its current size of 57,000 sq. ft.

YZF is one of the 26 airports in Canada included in the National Airports System (NAS). The NAS is defined by TC as those strategic infrastructure assets essential to Canada's air transportation system. YZF is included based on its arctic location and as the capital city of the Northwest Territories.

In 1995 the land, assets and operations of all the airports in the NWT, including YZF and the associated federal staff and resources, were transferred to the Government of the Northwest Territories⁴⁵. This is unlike many of the other NAS airports that were transferred to Canadian airport authorities under a long-term lease arrangement, thereby ensuring continued ownership by the Crown, and requiring them to operate as self-sustaining businesses and to facilitate economic development in local communities.

As part of the transfer agreement, the NWT has been receiving annual payments from the federal government for the operation of YZF and other airports in the NWT airports system. However, these annual transfer payments now go into the NWT's general base funding to fund a multitude of services and projects. None of these funds have been or will be included in YZF's annual budget; for YZF to benefit, it must compete with other NWT priorities. These transfer payments are adjusted annually by the annual population adjusted gross expenditure calculator. As NWT's population is declining currently, NWT's base funding is also declining, causing further issues in funding capital intensive programs and services with fixed costs (e.g., hospitals, and airports).

Aviation traffic at YZF has doubled since the late 1980's and is expected to continue to grow at a higher rate than the national average forecast for the top 100 airports in Canada. To meet the current demands and expand as the aviation hub for the North, YZF must renew and expand primary facilities.

YZF hosts extensive commercial activities that rely on quality aviation facilities and services. Non-aviation related businesses are attracted because of available land and good access. YZF also services federal and territory aviation needs associated with national defence, aircraft forest fire fighting, medevac and charter aircraft operations and base facilities. Together, these businesses generate significant economic impact for the Northwest Territories, the City of Yellowknife and the GNWT through employment, corporate product and services sale, consumption of goods and services, business and personal taxes and land rentals.

⁴⁵ Northwest Territories Arctic Airports Transfer Agreement, 1995

YZF is managed by the GNWT Department of Transportation. It serves as the primary aviation gateway to other communities of the Northwest Territories. The Department is working with many partners – industry, other territorial departments, the City of Yellowknife - to chart a course for future development of the airport, which will emphasize safety, security and efficiency. As stated in the *Review of Governance Options for Yellowknife Airport*:

“... previous works have been initiated with the intention of moving toward an airport authority model of operation, but each of these initiatives has failed. Strong and sustained resistance to change has been presented by stakeholders, tenants and unions and has been sufficiently strong to prevent the furtherance of the initiative as presented.”

Air transportation is an essential component of the implementation of strategic activities for the government of the NWT. Because the airport is operated as a government department, access to resources for infrastructure is limited by competing demand for financial resources from other government departments. This competition is further compounded by the fact that revenues generated by the airport are returned to general revenues and not retained by the airport.⁴⁶

Historically, revenues generated at small traffic volume airports throughout the world have not matched operating and development costs. Governments have funded small airports and user fees have been kept low. Since 1995, there has been a gradual movement for Canadian airports to increase fees and charges in an attempt to create more business-oriented facilities on the user pay principle. YZF has yet to generate sufficient revenue to match operating and development costs. However a substantial reduction in airfares on north-south traffic may provide sufficient room to increase fees and charges on the user pay principle and bring financial self-sufficiency to YZF.

Location

YZF is located in Yellowknife, NWT, and is accessible by highway. The airport is considered by the Department of Transportation (DoT) as a “gateway hub” and a main access point to other provinces/territories from the NWT.

The airport’s elevation is 675’ (206 m) above sea level, at Latitude 62.4682N and longitude -114.443W.

4.2. CURRENT GNWT AIRPORTS GOVERNANCE STRUCTURE

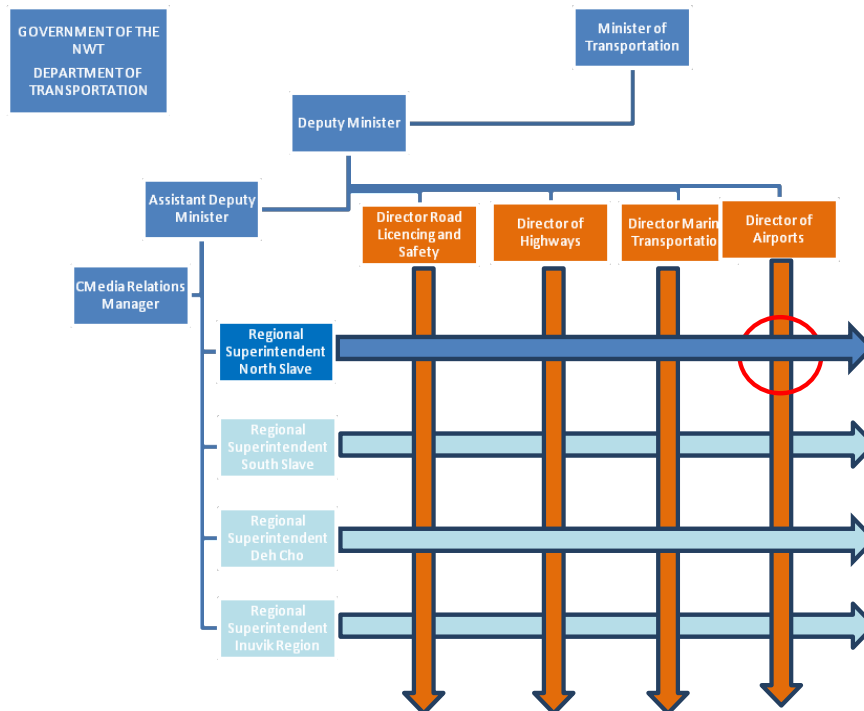
YZF is one of the 27 airports owned and operated by the GNWT Department of Transportation (DOT). DOT is under the direction and control of the Deputy Minister, Transportation. YZF and four small local airports are under the direction of the Regional Airport Manager, Yellowknife Airport who reports to the Superintendent of North Slave Region. Mechanics and the CSB facility also provide services to support DOT Highway Operations which also reports to the Regional Superintendent.

Management and staff of YZF do not have a direct reporting relationship with the Director of Airports. Airports HQ Division under Director, Airports provides services of

⁴⁶ Alternate Governance: A Review of Governance Options for the Yellowknife Airport, Leland Stroman, undated

the Departments of Programs and Standards to manage delivery of most operational activities where regulatory compliance is the objective. The sub-division of Airport Facilities directs and controls all capital projects and the related capital budget.

Figure 2. NWT/DOT Airports – A Matrix Organization



4.3. OVERVIEW OF SERVICES AND FACILITIES AT THE AIRPORT

An overview of the facilities and services at YZF is shown in Figure 3.

YZF is a certified airport and has two paved runways:

- Runway 16/34 – 7503' x 150' asphalt
- Runway 10/28 – 5001' x 150' asphalt

There are ten aircraft parking locations on the main apron. Gates 2-10 are used for schedule passenger aircraft only, and Gate 1 is used to accommodate some unscheduled or charter flights and military aircraft.

Navigational and visual aids include: high and medium intensity airfield lighting, high intensity approach lights (HIAL), precision approach path indicator (PAPI) on runways 10, 28 and 16, runway visual range (RVR), a medium power non-directional beacon (NDB), a VHF omnidirectional range beacon / tactical air navigation system (VORTAC), and an instrument landing system (ILS), a secondary surveillance radar (SSR), windsocks, a strobe beacon and a runway identification lighting system (RILS).

There is a NAV Canada control tower located at the airport (open 7 am – 10 pm, seven days a week), with a Flight Service Station (FSS) available 24/7.

Aviation fuel (100LL Avgas, Jet A-1 turbine, F-34 turbine fuel (military designation), and all types of oil are available from Midnight Petroleum (Esso) and Diamond Aviation Services (Shell). De-icing is done at a central location on the main apron (not at the gates) using de-icing fluids types D and A. There is also hangarage, aircraft servicing (minor repairs), and jet aircraft starting units (JASU)

YZF is classified as a “port of entry” for general aviation aircraft of up to 15 passengers (AOE/15), with CBSA provided customs services available to international passengers weekdays.

Passenger services available in the terminal include a restaurant, gift shop, ATM machine, pay phones, vending machines, and direct courtesy phones to hotels, taxi and car rental companies. There is a pay parking lot for vehicles. There are two car rental companies (Budget, Enterprise, Hertz) located at the airport, as well as a hotel shuttle service to 4 hotels, and taxi service (Aurora and City Cab).

There are a variety of cargo facilities at YZF operated by carriers (First Air, Canadian North, Buffalo Airways, Air Tindi), and expediting and logistics firms (G&G Expediting, Braden Bury Expediting, Deton Cho logistics). First Air and Canadian North have bonded warehouse facilities. Commercial tenants are listed in Table 4 below.

Table 4. Commercial Tenant List

Air Carriers (scheduled & charter): • Air Tindi Ltd. • Bradley Air Services Ltd. (First Air) • Summit Air (8199400 Canada Inc.) – charter • Buffalo Airways Ltd. • Canadian North Inc. • Great Slave Helicopters Ltd. • Jazz Aviation LP • Landa Aviation – L&A Aviation Ltd. (charter) • Northwester Air Lease • Summit Helicopters • Wright Airways Ltd. • Ursus Aviation (charter) • WestJet	General Aviation (corporate & private) • Department of National Defence • RCMP (Air Services branch) • ~ another 50 private and corporate aircraft owners
Fuel / FBO / Aircraft Servicing • Fuel Flo Logistics • Imperial Oil Ltd. • Shell Canada Products Ltd. • Strategic Aviation Services • Northern Star Aviation (aircraft groomer)	Ground Transport incl. Car Rental • Aurora Taxi Ltd. • Budget Rent a Car • City Cab (1993) Ltd. • Darryl's Shuttle Services Ltd.
Commercial Retail / F&B • GT Technology Vending (novelty items) • Hay River Liquor Retailers • Hub Publications Ltd. • Mohua Rasikal NWT Ltd. (Quiznos Canada)	Cargo / Logistics / Freight Forwarding • Braden Bury Expediting Ltd. • Buffalo Parcel Courier Service • Canada Post Corp. • Deton' Cho Logistics Ltd. (see also Deton')

- Real Estate) - Northern Frontier Visitor's (gift shop) - Northern New Services Ltd.	- Cho Corp) - Northwest Transport Ltd. - Private Sky Aviation (logistics)
Airport Services - GNWT / DOT - Garda Security Screening Inc. - NAV Canada - Scarlet Security Services	

The RCMP 'G' Division maintains a hanger at YZF, as does the Royal Canadian Air Force. Canadian NORAD Region Forward Operating Location (FOL) Yellowknife is located at YZF and is used for forward deployment of the CF-18 Hornet in times of conflict, and for search and rescue missions with a CC-138. The 440 Transport Squadron is an integral part of 17 Wing Winnipeg, with a primary role to provide airlift support to CF Northern Area, transporting Ranger and Cadet personnel and a myriad of supplies and cargo throughout the Arctic region. YZF also accommodates a number of expeditors and related transportation.

There are 227 aircraft based at YZF⁴⁷, broken down as follows:

- 156 (69%) of the aircraft are airplanes, and 71 (31%) are helicopters;
 - Of the 156 airplanes, 103 (66%) are piston, and 53 (34%) are turbo-prop.
- 74 (33%) are privately owned, while the remaining 152 (67%) are commercial, and one is State owned:
 - Of the 152 commercial aircraft, 30 (20%) are piston aircraft, 50 (33%) are turbo-props, and 72 (47%) are helicopters.
 - Of the 74 private aircraft, 2 (3%) are turbo-prop aircraft, and 72 (97%) are piston aircraft.

4.4. AIRPORT LANDS

Airport management has indicated that there is little airport land to develop that is in its current serviced parcels and developing new serviced parcels would require road access only as there is no piped water/sewer on site, no plan to provide it, and no airside access. Figure 3 (2012 orthophoto) indicates potential runway extensions (to 10,000' and 11,500'), a new proposed terminal building, and a large commercial development area to the west (2 phases). While no specific figures have been provided, the amount of investment required to implement the plan would be significant.

The Airport Manager (once trained in commercial development processes), through the powers described in *the Commissioner's Public Airport Lands Regulations* has the authority to enter into a lease agreement for the whole or a part of a building, structure or premises on public land. However, this authority has not yet been delegated and all commercial development is currently handled by the Airports Group at Headquarters. YZF management has been working closely with the Commercial Development group, and co-location at YZF may be a possibility in the future.

⁴⁷ Source: Canadian Civil Aircraft Register (March 2015)

Leases set out the rental rate per square metre, provide for the adjustment of the rental rate, and specify the term of the lease. Leases also include a levy on the lessee for an airport maintenance fee to cover the cost of maintaining common use areas or facilities.

The Deputy Minister may, on giving 180 days written notice to the lessee, cancel a lease. The maximum term of a lease is 20 years. Leases can be renewed.

[illegible]

4.5. AIRPORT MANAGEMENT AND STAFFING

As illustrated in Figure 4, the GNWT/DOT employs 32 people at the airport. All are full-time including the Airport Manager, 26 Operations staff, 1 administrative clerk, and 5 part time or seasonal maintenance staff. The greatest change since 2003 is the addition of 4 mechanics / apprentices.

The **Airport Manager** reports to the Regional Superintendent, North Slave and is responsible for all aspects of the airport operation, including: meeting and complying with all regulatory requirements, maintenance of all airport infrastructure, facilities and equipment, and establishing and maintaining agreements with airport users / tenants. The Airport Manager directly supervises the Manager Operations and Maintenance, and the Manager Safety and Security.

The **Operations and Maintenance** staff report to the Manager Operations and Maintenance and are responsible for snow removal, grass cutting, airfield inspections, maintenance of airfield markings, markers and signs, and airfield lighting. Operations and Maintenance staff also include three Heavy Equipment Technicians (HET), two apprentice HET and two Airfield Electricians (currently have three HET and 2 apprentices). These positions provide services for the entire fleet including airport, highways, highway patrol and special projects.

The **Resource Management Officer** position is not staffed and has been replaced by the Airport Security Administrator.

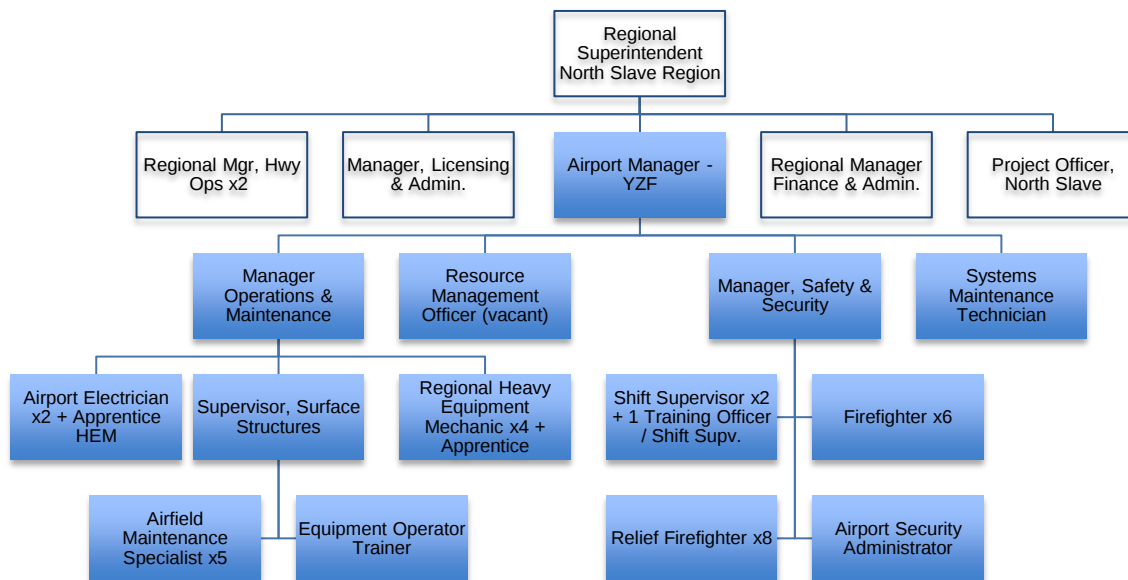
The **Safety and Security** staff reports to the Manager Safety and Security and is responsible for emergency response services, terminal security (contract employees), airfield access and security, as well as the airport's safety management system, and airport security program. The Airport Security Administrator provides administration and manages pass control.

The **Systems Maintenance Technician** is responsible for the ongoing maintenance of the CCTV system, conveyor and baggage systems, phone and internet, etc.

The **Maintenance Utility Specialist** is responsible for the maintenance of the Hold Baggage Screening (HBS) system and supports the ongoing maintenance of other in-house system.

The organizational chart in Figure 4 does not include the positions provided by other DOT departments that provide services to YZF, e.g. accounting / finance (including payroll, accounts payable, accounts receivable), procurement, engineering, planning, executive management etc. There is no current staffing equivalent estimate available; however it is important to note that the HQ personnel who provide these services to YZF also provide the same services to the other 26 airports operated by the GNWT. The organizational chart also does not include most trades which are provided by contractors.

Figure 4. YZF Organizational Chart (Feb. 2015)



There is one collective agreement that encompasses airport staff.

4.6. AIRPORT OPERATIONS

Hours of Operation

YZF is a certified airport, operational 24 hours per day, 7 days per week, and is capable of supporting both day/night and VFR and IFR operations. The airport is staffed from 05:30 to 23:30 including statutory holidays.

Aircraft Fuelling

Aircraft fuelling is provided by fixed based operators (FBOs).

Emergency Response Services (ERS)

YZF is classified as a Category 6 airport for aircraft rescue and firefighting services (ARFF), with services provided by 10 airport firefighters (2-3 per shift). Municipal ambulance services are located nearby, and additional firefighting services can be provided by the Yellowknife Fire Department.

The firefighters and ERS equipment operate out of the Combined Services Building (CSB) / Fire Hall which was built in 2011.

Airfield Maintenance

Airfield maintenance, including airfield electrical is provided by operations and maintenance staff, from the CSB. A new sand storage facility was built in 2011.

Vehicle and Equipment Maintenance

Airport as well as highways vehicle and equipment maintenance takes place out of the Combined Services Building (CSB). At times equipment and personnel are shared.

Bird and Wildlife Management

The ERS (firefighters) are responsible for bird and wildlife management e.g., patrols, reporting, bird scaring etc.

Airfield Access Control and Security

The Manager Safety and Security is responsible for airfield access control and security including the Airport Security Program (ASP), and addressing security issues reported to him. Perimeter patrols are done by the ERS staff (firefighters).

CATSA provides passenger screening in the terminal. There is 100% hold bag screening (HBS) in the terminal. Security screening is not available to charters or private aircraft using the FBO instead of the passenger terminal. Resource companies are therefore moving passengers to camps through the terminal so that their passengers are screened; there is separate pre-board screening (PBS) of passengers (not through CATSA) although the same baggage screening process applies.

Building Trades / Services

Most building trades are outsourced, including janitorial services. Independent contracts are awarded following a public, competitive process.

4.7. HISTORICAL AIR TRAFFIC ANALYSIS

4.7.1. PASSENGER TRAFFIC

Air services are provided by five major carriers and a number of smaller regional carriers, as well as several charter operators. There are approximately fifty daily departures to destinations across Canada (not including all of the regional and mine charter flights that occur daily). Importantly, there are also several air carriers involved in the movement of air cargo. YZF air carriers operate B-737, ATR-42, Dash-8 and Dash-7, and C46 aircraft in “combi” passenger / cargo or all-cargo configurations.

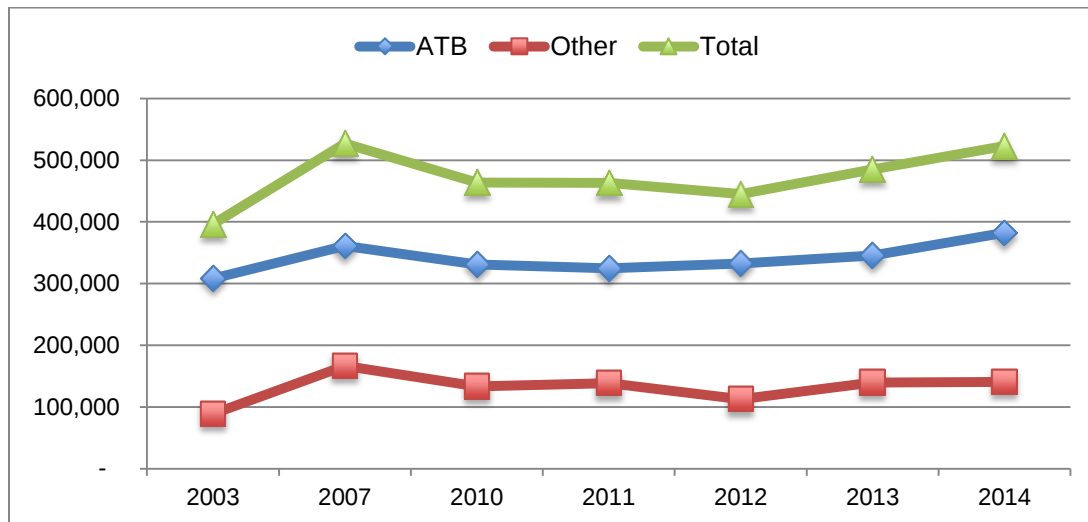
YZF processes over 500,000 passengers each year. Approximately 350,000 of these passengers pass through the terminal building each year (382,212 in 2014). An additional 140,000 passengers (mostly on charter flights) are processed through facilities operated by fixed based operators. Peak hours are between 06:00 and 07:00 and again at 17:00. It is understood through those interviewed that the peaks are

manageable in the terminal building, and the traffic is spreading out. Load factors are also reported to be high.

Total passenger traffic increased 33% between 2003 and 2007; declined 12% between 2007 and 2010; and then rose 12.7% between 2010-2014 (average annual growth of 3.0%). The spike in 2007 is due in large part because of the poor winter road conditions that year, and 2007 traffic figures should be considered an anomaly. During the period 2010-2014, passenger traffic in the terminal building (ATB) grew at a faster rate (15.5% total, 3.7% p.a.) than that through fixed based operators (5.7% total, 1.4% p.a.).

Passenger traffic is healthy because of the shift system at the mine (2 in / 2 out).

Figure 5. YZF Enplaned and Deplaned Passengers



Source: GNWT

The 2008 Development Plan Update forecasts traffic to reach between 773,000 (low) – 1,137,500 (high) by 2027. It is not known, however, whether or not the anomalous traffic figures of 2007 inaccurately influenced the forecasts prepared in 2008. There have not been any forecasts prepared since.

4.7.2. AIRCRAFT TRAFFIC

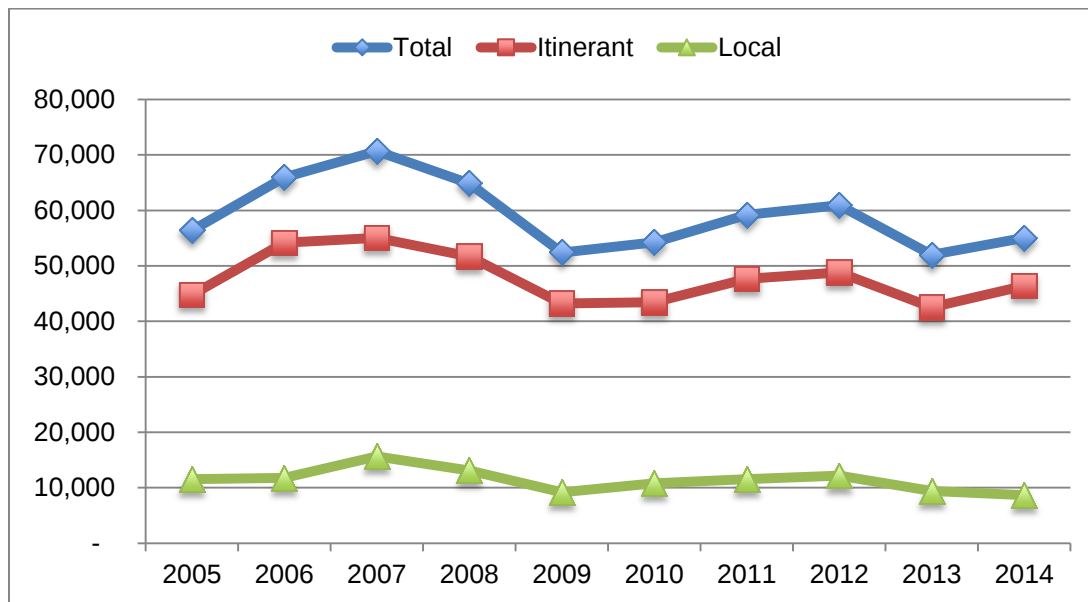
The airport saw over 50,000 air traffic movements in 2013, ranking it the 32nd busiest among the 42 airports in Canada with control towers⁴⁸. There were 53,167 total aircraft movements in 2014, an increase of 2.3% over 2013.

The majority (~ 80%) of the aircraft traffic at YZF is itinerant, i.e. aircraft proceed to or arrive from another location.

⁴⁸ Source: Statistics Canada catalogue 51-209-X (TP 577)

Aircraft traffic decreased 5.6% (or at an average annual rate of 0.6%) between 2005 and 2014; however the decrease in the past five years (2010-2014) is less, at 2% in total, or at an average rate of 0.5% per year. As shown in Figure 6, there were significant decreases in traffic in both 2009 and 2013.

Figure 6. YZF Aircraft Movements by Class of Operation



Source: Statistics Canada TP 577, Catalogue 51-209X, Table 2-1; CANSIM Table 401-0008 for 2014 (monthly)

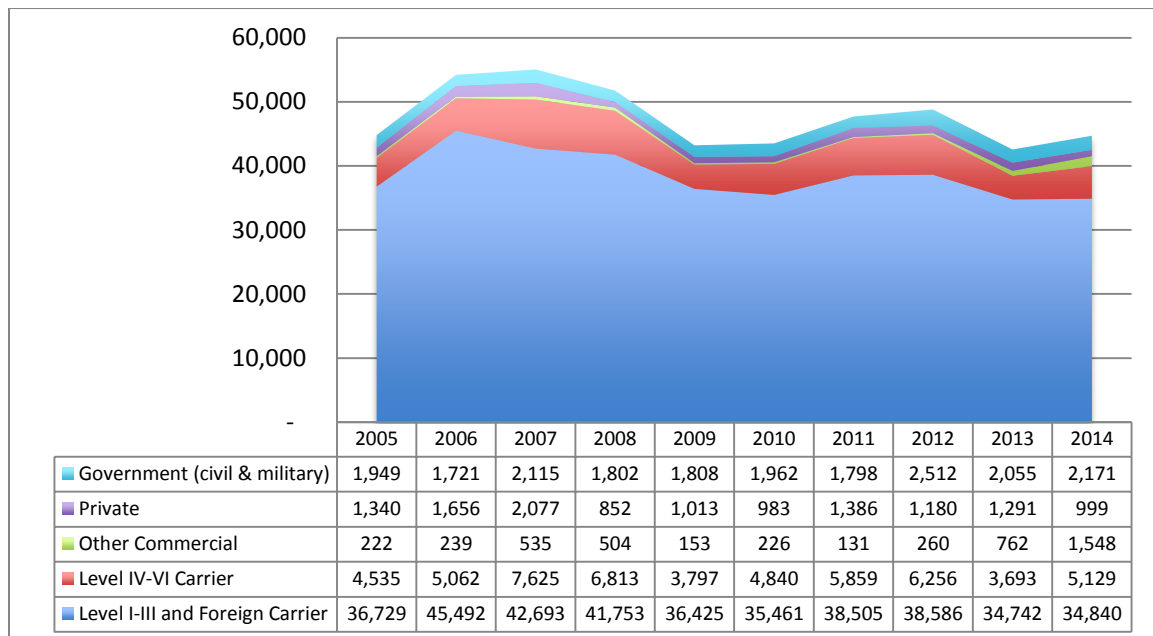
The 2008 Development Plan indicates that there was a 36% increase in itinerant movements between 2003 – 2007 because of additional passenger carrier services & mining-related movements. Airport management have noted however that 2007 was an exceptional year because of the poor condition of the Ice Roads, and the 2007 movements figure should be considered as an outlier.

The total air traffic movements at YZF decreased 19.2% between 2008 and 2009; this is approximately three and a half times the average decrease (-5.2%) among the 41 Canadian airports with Towers. The decrease in 2008 and 2009 may appear significant in comparison to the artificially inflated 2007 figures; however there was a significant reduction in mineral exploration that followed other international economic factors which also contributed to the decreased traffic in those years. Traffic at Canadian airports continued to decrease for each of the next five years, however the 12.8% decrease between 2012 and 2013 at YZF was approximately seven times the average (-1.8%) among the airports with Towers and Flight Service Stations.

As shown in Figure 7, the majority (~ 81%) of the aircraft traffic is by Level I-III carriers⁴⁹, with approximately 11% by Level IV-VI carriers, 1% by other commercial operators, 3% by private operators, and 4% by government (civil and military) operators.

The 2008 Development Plan Update forecasts movements to reach between 66,000 and 102,000 by 2027. No new forecasts have been prepared since. These forecasts should be treated with caution as it is unknown if or how the anomalous spike in 2007 affects those forecasts.

Figure 7. YZF Itinerant Aircraft Movements by Type of Operator

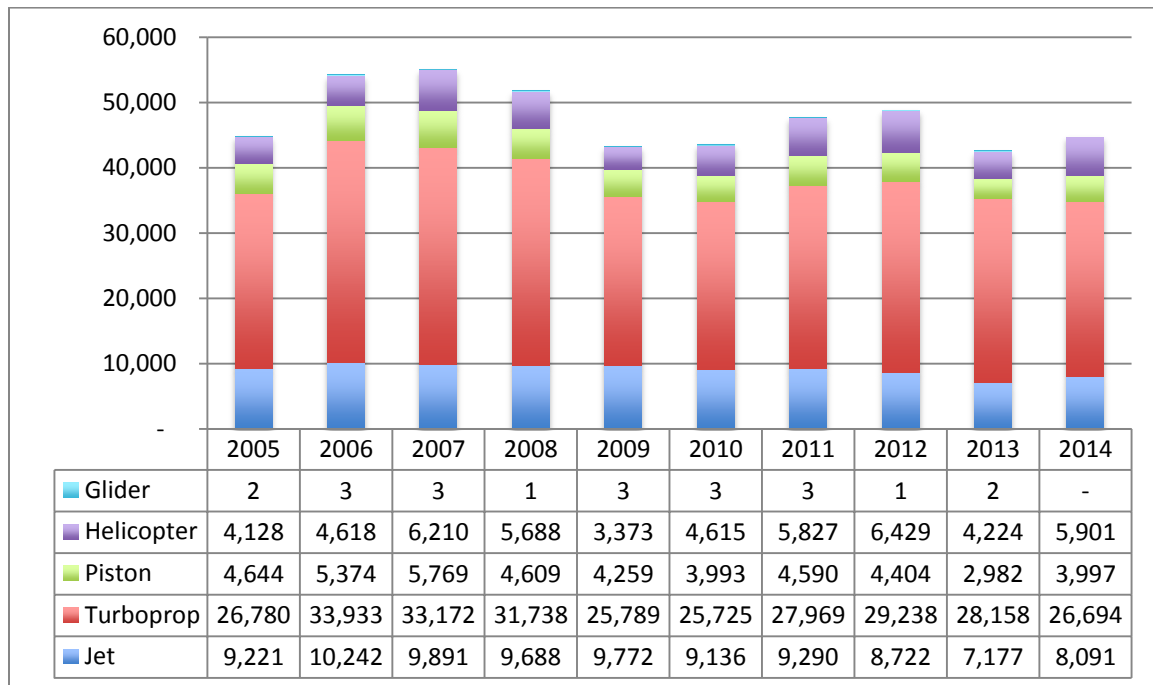


Source: Statistics Canada TP 577, Catalogue 51-209X, Table 4-1; CANSIM Table 401-0009 for 2014 (monthly)

As shown in Figure 8, the majority (~ 60%) of aircraft movements at YZF are made by turboprop aircraft, with approximately 20% by jet aircraft, 9% by piston aircraft, and 11% by helicopters.

⁴⁹ From TP 577 - Air Carrier Categorization (effective 2010): Level I - at least 2 million revenue passengers or at least 400,000 tonnes of cargo; Level II - between 100,000 – 1,999,999 revenue passengers or between 50,000 – 399,999 tonnes of cargo; Level III – gross revenues of at least \$2M and not considered Level I or II; Level IV – gross revenues of less than \$2M and not considered Level I or II.

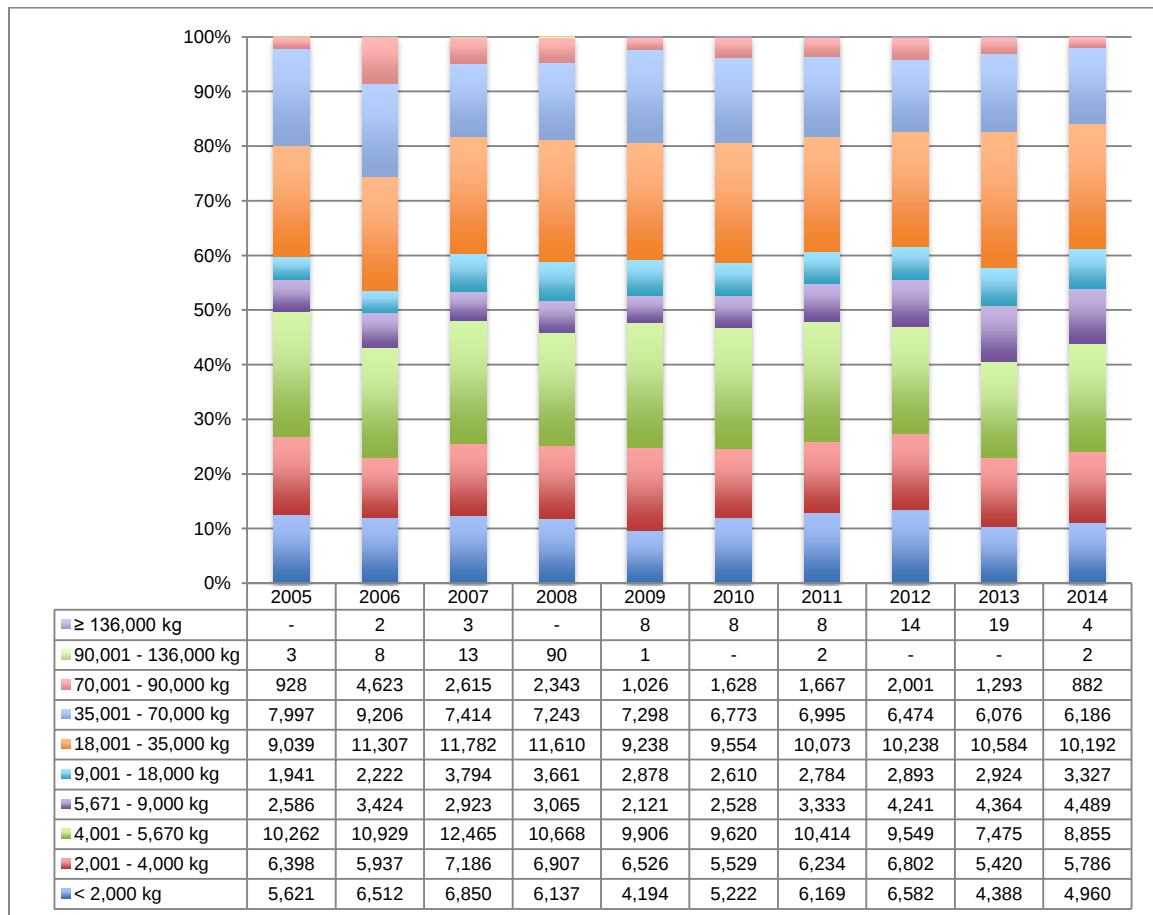
Figure 8. YZF Itinerant Aircraft Movements by Type of Power Plant



Source: Statistics Canada TP 577, Catalogue 51-209X, Table 6-1; CANSIM Table 401-0011 for 2014 (monthly)

As shown in Figure 9, the majority (average 37%) of the itinerant movements at YZF are by aircraft in the 18,001 – 70,000 kg weight category (e.g., Dash 8, CRJ 200, CRJ 705, Embraer E-175, B737-300), followed by smaller aircraft in the 4,001 – 5,670 kg weight category (e.g., Cessna 208, Pipers) (average 21%).

Figure 9. YZF Itinerant Aircraft Movements by Aircraft Weight Group



Source: Statistics Canada TP 577, Catalogue 51-209X, Table 7-1; CANSIM Table 401-0012 for 2014 (monthly)

4.7.3. AIR CARGO

A number of carriers currently provide air cargo services from YZF, including Air Tindi, Buffalo Air Express, Canadian North Air Cargo, First Air, Nolinor and North-Wright Airways.

The 2004 Development Plan Summary indicates that 22,800 tonnes of cargo (freight and mail) were flown on passenger / cargo flights or all-cargo operations, ranking YZF tenth among airports that published freight data with ACI/CAC at that time. The 2008 Development Plan Update estimates that air cargo processed through YZF in 2007 was in the order of 32,000 tonnes (i.e., a 40% increase over 2003). This increase was attributed in part to the strong growth in the mining and oil exploration activities in the North during this period.

Current reporting practices do not enable accurate reporting of cargo traffic at Canadian airports; therefore estimates of cargo traffic at YZF are based on information provided by

airport management and airport tenants. Cargo figures reported by Statistics Canada⁵⁰ are typically much lower than actuals (the latest Statistics Canada reported figure for YZF is only 1,974 tonnes (2012)). However, the Statistics Canada figures can be used to provide a rough estimate of the market share at each airport. Using this, YZF accounts for approximately 35% of the cargo processed in the NWT.

4.8. HISTORICAL FINANCIAL ASSESSMENT

Generally the public sector does not have profit maximization as a primary objective. At YZF, the Airport Manager works within an operating budget. Any additional receipts are deposited to the consolidated general revenue account, and only rarely results in funds being retained by the department for operations. There are therefore disincentives to revenue generation, as costs associated with revenue generation are charged against YZF's operating budget, but revenues are not retained.

However, YZF also receives services from other departments, and the cost of these services is not accounted for in the YZF operating budget; in turn YZF also provides services to other departments with no revenues received. The amount of the costs associated with services provided by others is estimated and discussed below; however the cost associated with YZF providing services to other departments (and the associated lost revenue) is not known.

4.8.1. OPERATING SURPLUS / (LOSS)

A review of the financial statements for the airport during the period 2003 through 2014 indicate an operating loss each year ranging from 1 million to 2.5 million (see Figure 10 below). There was a significant decrease in the operating loss between 2012 and 2013 (from -\$2.5M to -\$1.5M). This is due in large part to the significant increase in operating revenues (19%) and a small decrease in expenditures (-4%). The trend however reversed between 2013 and 2014 when operating revenues fell (mostly concessions and fees), while expenditures rose (mostly contracts).

Additionally, there are indirect costs associated with YZF that are not included in YZF's financial statements. While exact figures are unknown, these have been roughly estimated by DOT to be in the order of **\$1.4 million a year**, and include (rough approximations):

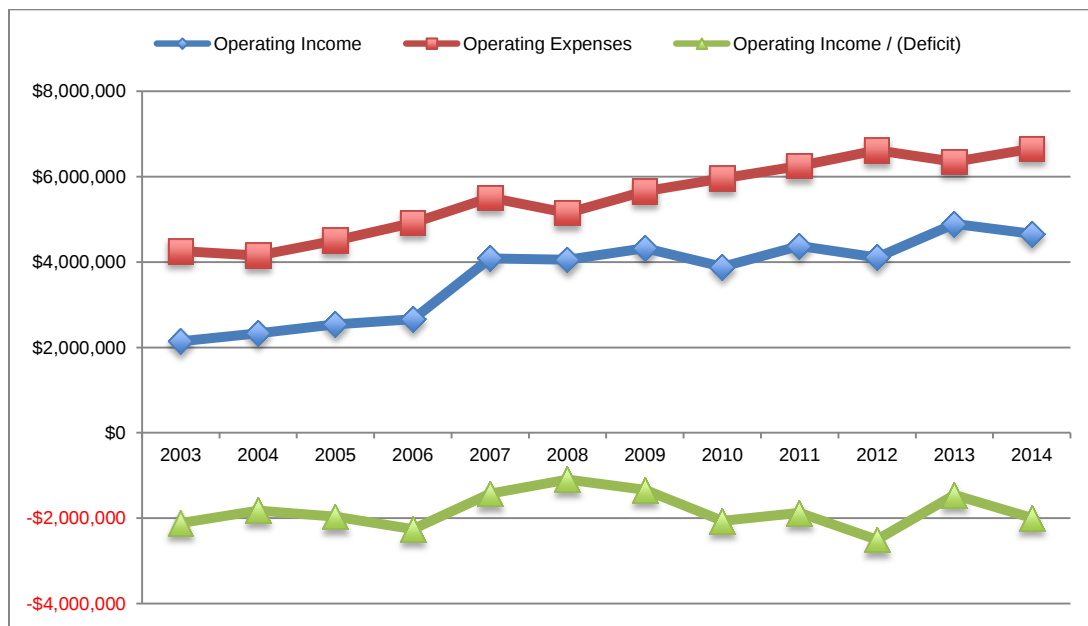
- North Slave Region administrative support: \$60,000
- Airports HQ – commercial development, engineering and SMS: \$600,000
- Airports HQ – environmental testing: \$15,000
- HR Department: \$20,000
- Justice Department: \$30,000
- Public Works and Services administration costs: no estimate available; utilities costs included in YZF's financial statements

⁵⁰ Statistics Canada catalogue 51-203-X notes 1,794 tonnes of cargo at YZF in 2012, and 5,055 tonnes for all of NWT.

- Grants in lieu of taxes to the City of Yellowknife: \$657,000
- Payroll administration by Department of Finance: no estimate available

The operating loss is therefore significantly greater than reported.

Figure 10. YZF Operating Surplus (Loss) 2003 – 2014
(excluding costs associated with services provided by other groups or departments).



It is not uncommon for small airports (less than 250,000 passengers) to struggle financially; however airports larger than this tend to be financially viable i.e., are able to cover operational and a portion of their capital costs.

As shown in Figures 11 & 12 the operating loss per passenger at YZF (excluding additional costs of services provided by other government groups or departments) is substantially higher than that at airports of comparable size⁵¹.

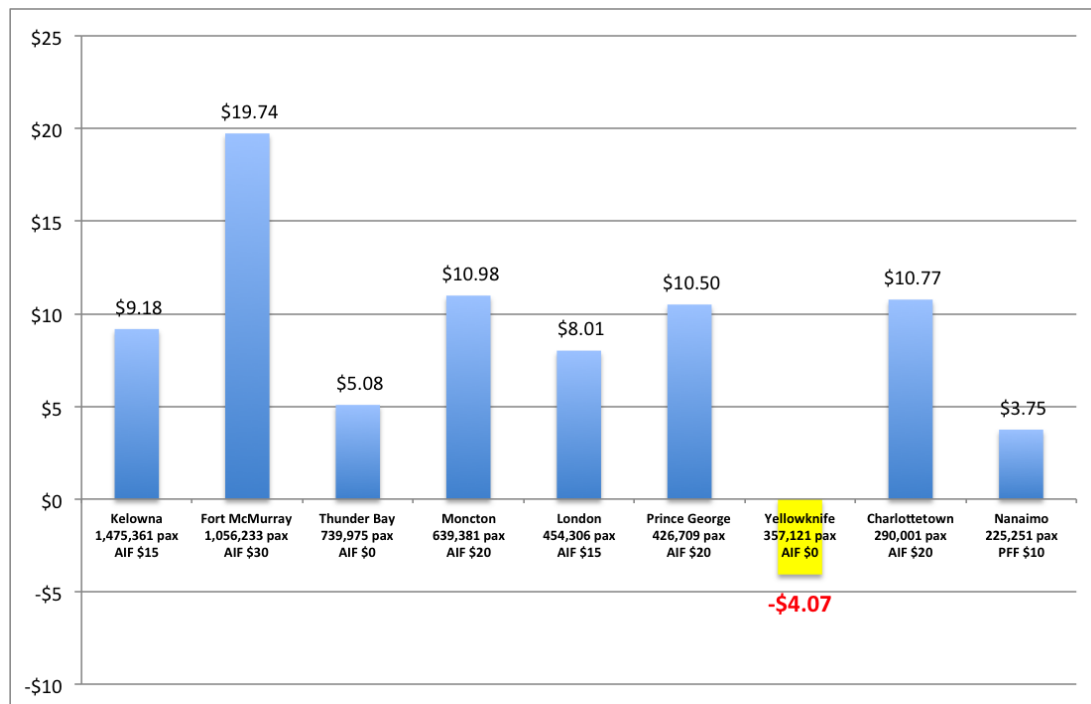
⁵¹ Federal rent payments are included for the two airports that pay rent (Thunder Bay and London)

Figure 11. EBITDA (excl. AIF revenues) per E/D Passenger – 2013



Source for financial information: airport annual reports (except YZF from GNWT). Source for passenger statistics: annual reports &/or Statistics Canada Catalogue 51-203X.

Figure 12. EBITDA (incl. AIF revenues) per E/D Passenger – 2013



Source for financial information: airport annual reports (except YZF from GNWT). Source for passenger statistics: annual reports &/or Statistics Canada Catalogue 51-203X.

4.8.2. HISTORICAL OPERATING REVENUES

A 2003 Stakeholders Panel report notes that “any new revenue generated by the airport is not retained by the airport but rather taken into general GNWT revenues, despite the fact that costs associated with securing the new business are charged against the airport’s budget”. It is understood that this is still the case. The same report also indicates that a “staff hiring freeze prevented airport from properly managing commercial leases resulting in significant loss of revenue annually”. It is understood that measures have been taken in recent years, and continue to be taken, to put more emphasis on commercial development, with the assistance from Airports Group HQ staff.

Operating revenues at YZF are earned through aeronautical and non-aeronautical sources:

- Aeronautical revenues include landing fees, general terminal fees, and aircraft parking;
- Non-aeronautical revenues include airside leases, groundside land leases, terminal leases, concessions (e.g., food & beverage, retail, car rental), vehicle parking, and third party recoveries (CATSA and NAV Canada).

Most airports attempt to reduce their reliance on aeronautical revenues by developing more steady streams of revenues through non-aeronautical sources. The ratio of aeronautical to non-aeronautical revenue at YZF has been improving over the past four years as shown in Figure 13 below, and it is positive that the non-aeronautical revenues outweigh the aeronautical revenues. However, as discussed later in this report, YZF’s aeronautical rates are far below those charged by most peer airports. If the rates were “normalized” (i.e. increased) the ratio of aeronautical to non-aeronautical revenues would reverse.

Aeronautical

In the past four years, YZF has recorded on average, \$2.1 M in aeronautical revenues. General terminal fees account for slightly more than half of these aeronautical revenues, while landing fees account for approximately 40%.

YZF does not charge an airport improvement fee (AIF) which is often included in aeronautical revenues; nor does it charge a fuel concession fee (cents per litre sold).

Aeronautical revenue per passenger over the past four years has averaged \$4.50, with 2011 being the highest year at \$4.78, followed closely by \$4.75 in 2013. The lowest year was 2014 with \$4.03. This is approximately \$2 (or nearly 50%) per E/D passenger lower than the average among peer airports.

Figure 13. YZF Aeronautical to Non-Aeronautical Revenues (2011-2014)

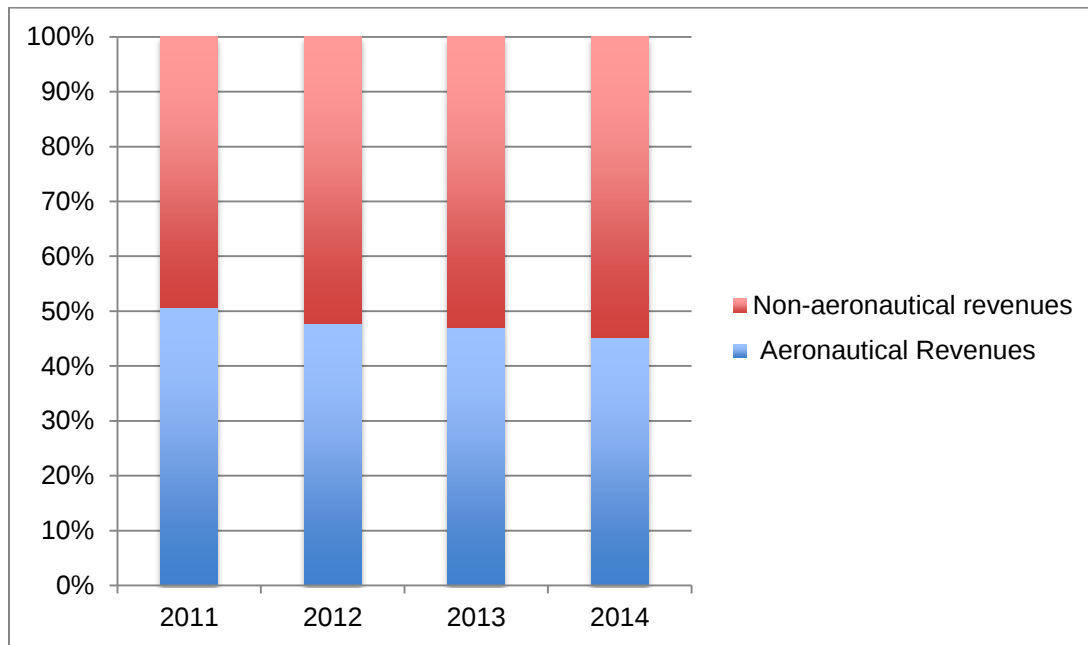
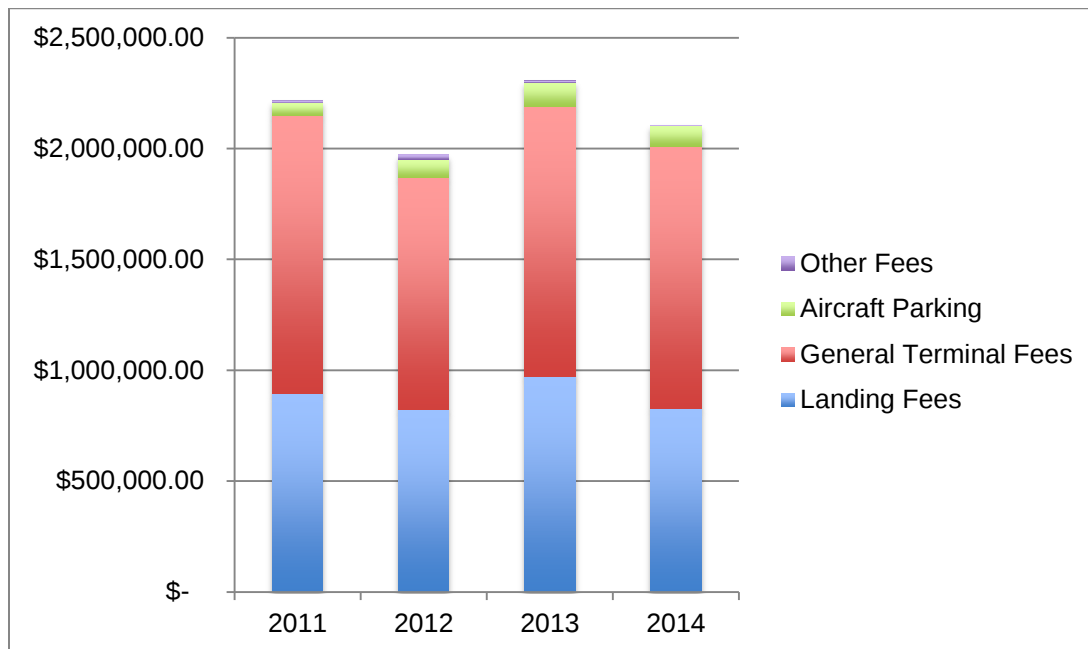


Figure 14. YZF Aeronautical Revenues (2011-2014)



Non-Aeronautical

In the past four years, YZF has recorded on average, \$2.4 M in non-aeronautical revenues. Non-ATB leases account for approximately 75% of the non-aeronautical revenue. These include land leases and licenses, employee parking, car rental, taxis, other buildings, and the airport maintenance charge. Land leasing is by far the largest component of the non-ATB lease revenue (~ 85%).

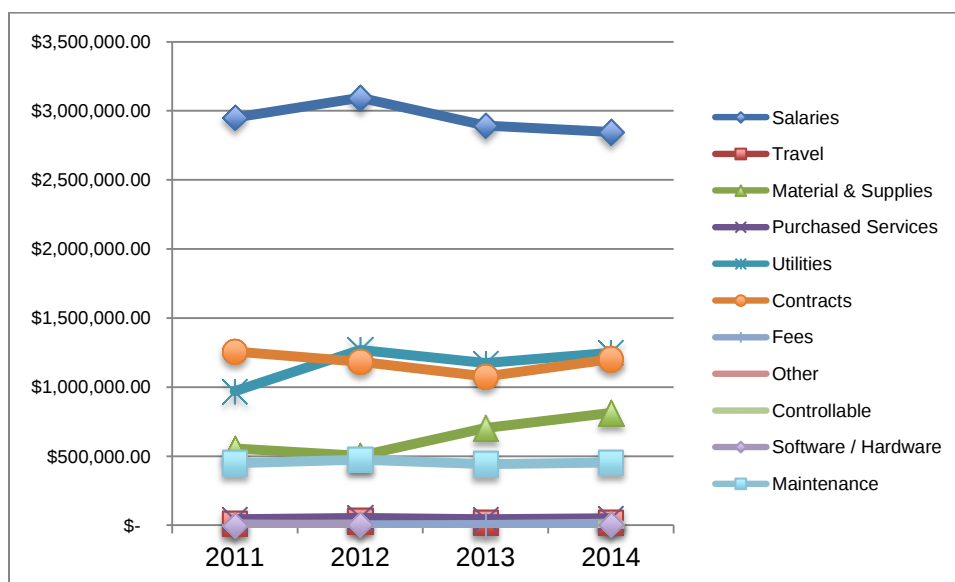
Non-aeronautical revenue per passenger over the past four years has averaged \$4.94, with 2014 being the highest year at \$4.88, followed closely by \$4.86 in 2012. This is approximately half that of the average among comparator airports.

4.8.3. HISTORICAL OPERATING EXPENSES

Operating costs at YZF are in the order of \$6.5 million a year. Salaries is the largest expenditure component which is common at airports.

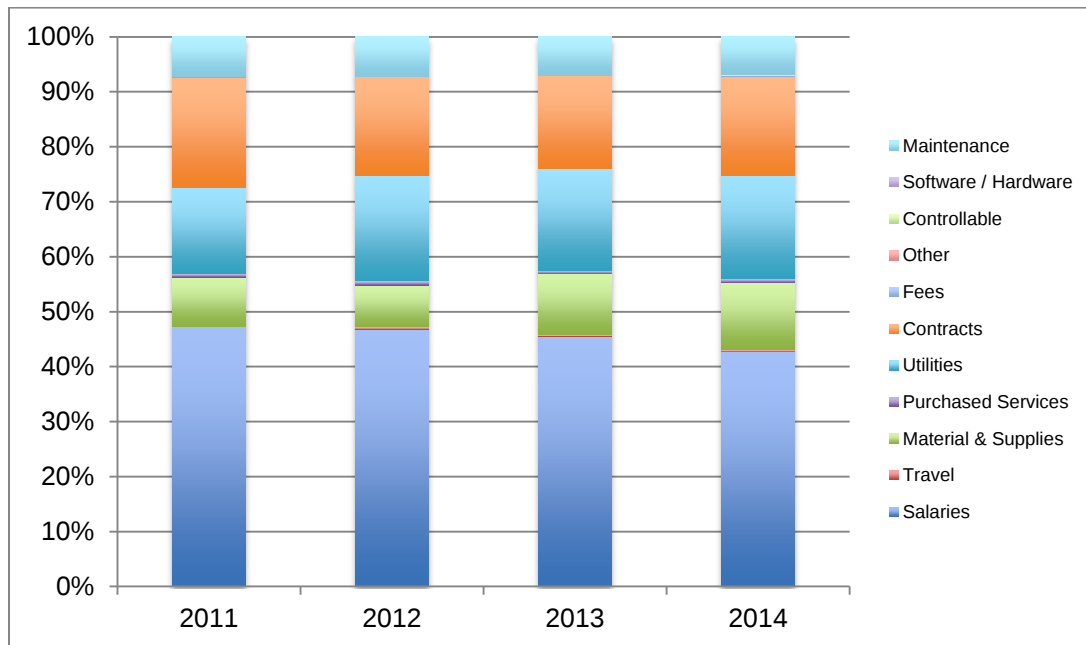
Operating expenses per E/D passenger at YZF are in the order of \$17.77 which is essentially the same as the average among peer airports.

Figure 15. YZF Operating Expenditures (2011-2014).



As previously mentioned, GNWT / DOT estimates that there are an **additional \$1.4 million** in indirect costs associated with services provide by other DOT departments (Airports HQ, North Slave Region administrative support, HR department, Justice department (legal), Public Works and Services, and Grants In Lieu of Taxes (GILT). These have not been included in the graphs above.

Figure 16. YZF Operating Expenditures (2010-2014).



4.8.4. CAPITAL EXPENDITURES

Capital budgets for infrastructure and capacity expansion are achieved through the budget allocations process, like any other asset owned by the territory. In effect, this means that a business case must be made to receive political priority during the annual budgeting process. When competing against schools and hospitals and other airports, making strategic long-term investments into YZF is not always the government's priority, understandably. Interestingly, this competition for capital is one of the key reasons why the federal government devolved national airports.

4.8.5. CURRENT FEES AND CHARGES / TARIFF MODEL

The fees and charges at YZF are applied in accordance with the "Public Airports Fees Regulations" which form part of the GNWT *Public Airports Act*. They are updated from time to time; usually every three to five years. The fees described in the Regulations apply to five of the airports owned and operated by GNWT: Fort Simpson, Fort Smith, Hay River, Inuvik, Norman Wells, and Yellowknife.

YZF charges landing fees, aircraft parking fees, and general terminal fees. Section 2.(4) of the Regulations states that these fees "do not apply if an authorized agent has granted a license under Section 6 of the Act to the owner or operator of an aircraft, or entered into an agreement under Section 7 of the Act with the owner or operator of an aircraft, for long-term parking of the aircraft". YZF also levies fees for electrical plug-ins either via an agreed amount or annual license.

The airport does not charge other types of aeronautical fees commonly applied at other commercial airports such as fuel concession fees, aircraft loading bridge fees, and fees for common-use equipment.

While no specific fee schedule for land and terminal leases was reviewed, it is understood that market rates are charged.

Below are summaries of the YZF airport fees regulations as of October 1, 2014, and described in Schedule A of the Regulations.

Landing Fees

AIRCRAFT LANDING FEES (Schedule A, Part 1) * applies to turbine powered aircraft only			
Aircraft weight (MTOW)	Domestic	Aircraft weight (MTOW)	International
< 21,000 kg	\$1.73 per 1,000 kg	< 30,000 kg	\$5.44 per 1,000 kg
21,001 – 45,000 kg	\$2.22 per 1,000 kg	30,001 – 70,000 kg	\$6.89 per 1,000 kg
> 45,000 kg	\$2.61 per 1,000	> 70,000 kg	\$8.20 per 1,000 kg
	Minimum \$3.94		Minimum \$15.43

A 2010 study⁵² at YZF stated “there is room to triple landing fees and still be among the lowest cost airport operators.” The recommended approach in this study was to adopt an ICAO-based fees and charges methodology; to gradually increase fees reflective of both operating costs and the market; and to also consider charging landing fees for piston aircraft.

If landing fee revenue were to triple, the current operating deficit would almost be eliminated (\$1.6M of the \$2M deficit i.e., a reduction of 80%). While beyond the scope of this study the elasticity of demand and effects on the overall economy should be considered in any future analysis of landing fee increases.

Aircraft Parking Fees

AIRCRAFT PARKING FEES		
Aircraft weight (MTOW)	Terminal Apron (Schedule B, Part 1)	Off-Terminal Apron (Schedule B, Part 2)
	Fee (for more than 2 hrs, rate for each full 2 hr period)	Fee (for more than 6 hrs, each 24 hr period or portion thereof)
Grace period	< 2 hrs - no charge	≤ 6 hrs - no charge
< 5,000 kg	\$6.11	\$6.11
5,000 – 10,000 kg	\$10.82	\$10.82
10,001 – 30,000 kg	\$20.01	\$20.01

⁵² “Yellowknife Airport Operation & Management – A Strategic Review”, August 2010, Thunder Bay Airport Services Inc.

30,001 – 60,000 kg	\$31.00	\$31.00
60,001 – 100,000 kg	\$46.79	\$46.79
100,001 – 200,000 kg	\$78.23	\$78.23
200,001 – 300,000 kg	\$109.29	\$109.29
> 300,000 kg	\$141.05	\$141.05

General Terminal Fees

GENERAL TERMINAL FEES FOR AIRCRAFT (Schedule C)	
Maximum Certificated Seating Capacity	Fee
≤ 5	No charge
6 – 9	\$15.00
10 – 15	\$34.00
16 – 25	\$50.00
26 – 45	\$92.00
46 – 60	\$140.00
61 – 89	\$220.00
90 +	\$290.00

Airport Improvement Fee (AIF)

Unlike other NAS airports (and now also at many smaller non-NAS airports) there is no Airport Improvement Fee (AIF) or Passenger Facility Charge (PFC) levied at YZF to fund capital improvements. It is understood however that the changes to the *Public Airports Act* currently under review could allow for an AIF.

The AIF as a concept dates back over 20 years and has been a funding source for capital improvements since the early days of airport devolution in Canada. However, the method of collection has changed significantly: originally (at Vancouver International) the passenger would have to pay at the airport after checking in and before going through security. At most Canadian airports it is now collected by the airlines at the time of booking and remitted to the airport after the flight is taken. The airlines keep a negotiated percentage for their administration of the scheme.

The application of the AIF has evolved over time and is now applied in a number of ways that reflect the operation of individual airports. Some airports have elected to charge a differential fee based on the passenger's destination: for instance, Vancouver, Regina and Saskatoon all charge "intra-provincial" passengers a \$5 AIF, while their "regular" AIF is \$20 in each case. Fort McMurray does something similar – charging a reduced AIF for passengers to Fort Chipewyan. Some airports – Calgary, Edmonton, Fort McMurray and St. John's being examples – also charge an AIF for passengers using the FBOs (particularly targeting commercial flights to the oil sands that don't operate out of the air terminal building) while not charging for flights on airplanes with 10 seats or less.

Figure 17 provides a summary of AIFs charged at other airports – large and small - in Canada. The average is \$18 per originating passenger.

Figure 17. Airport Improvement Fees (AIF) Charged at Other Canadian Airports

AIF (2015)							
Airport	Airport Code	Province / Territory	Amount	Airport	Airport Code	Province / Territory	Amount
Abbotsford	YXX	BC	\$5	Ottawa	YOW	ON	\$23
Bagotville	YBG	QC	\$25	Prince Albert (Jul.2015)	YPA	SK	\$15
Baie-Comeau	YBC	QC	\$10	Quebec City	YQB	QC	\$30
Bathurst	ZBF	NB	\$40	Red Deer	YQF	AB	\$10
Calgary	YYC	AB	\$30	Regina	YQR	SK	\$20
Castlegar	YCG	BC	\$7	Regina (Regina-Saskatoon)	YQF	SK	\$5
Charlottetown	YYG	PEI	\$20	Rouyn-Noranda	YUY	QC	\$20
Comox	YQQ	BC	\$5	Saint John	YSJ	NB	\$25
Cranbrook	YXC	BC	\$11	Sarnia	YZR	ON	\$20
Deer Lake	YDF	NL	\$20	Saskatoon (within SK)	YXE	SK	\$5
Edmonton	YEG	AB	\$30	Saskatoon (outside SK)	YXE	SK	\$20
Fort McMurray	YMM	AB	\$30	Sault Ste. Marie	YAM	ON	\$20
Fort McMurray (Fort Chipewyan pax)	YMM	AB	\$10	Smithers	YD	BC	\$25
Fort St. John	YXJ	BC	\$18	Stephenville	YJT	NL	\$20
Fredericton	YFC	NB	\$20	St. John's	YYT	NL	\$30
Gander	YQX	NL	\$25	Sudbury	YSB	ON	\$25
Gaspe	YGP	QC	\$15	Sydney	YQY	NS	\$25
Goose Bay	YJR	NL	\$20	Terrace	YXT	BC	\$7
Halifax	YHZ	NS	\$25	The Pas	YQD	MB	\$20
Hamilton	YHM	ON	\$25	Thompson	YTH	MB	\$20
Kamloops	YKA	BC	\$10	Timmins	YTS	ON	\$10
Kelowna	YLW	BC	\$15	Toronto (originating pax)	YYZ	ON	\$25
Kenora	YQK	ON	\$5	Toronto (connecting pax)	YYZ	ON	\$25
Kingston	YKG	ON	\$4	Toronto Billy Bishop	YTZ	ON	\$20
Kitchener	YKF	ON	\$15	Val d'Or	YVO	QC	\$20
Lethbridge	YQL	AB	\$15	Vancouver (within BC, YT)	YVR	BC	\$5
London	YXU	ON	\$15	Vancouver (outside BC, YT)	YVR	BC	\$20
Moncton	YQM	NB	\$20	Victoria (Jul. 2015)	YYJ	BC	\$15
Mont-Joli	YYY	QC	\$10	Waterloo (int'l flights)	YKF	ON	\$15
Montreal	YUL	QC	\$25	Waterloo (TB flights)	YKF	ON	\$20
Mont Tremblant	YTM	QC	\$25	Windsor	YQG	ON	\$15
Moosonee	YMO	ON	\$12	Winnipeg	YWG	MB	\$25
Nanaimo	YCD	BC	\$10	Yarmouth	YQI	NS	\$10

Comparison – Aircraft Turnaround Cost

The aircraft turnaround costs for several typical aircraft that operate at YZF were compared to those at Thunder Bay, Nanaimo, Prince George, Kelowna, Fort McMurray, Whitehorse and Iqaluit.⁵³ Detailed charts for the turnaround cost for each of the aircraft listed are found in Appendix D. A “Turnaround” refers to a commercial airliner landing, disembarking passengers, loading passengers for the next flight and then taking off. The costs associated with using airport facilities and infrastructure – on the airside and in the terminal - include landing fees, general terminal fees, common-use IT fees, flight information and baggage information displays (FIDS/BIDS) fees, loading bridge fees, and AIF charges, as applicable to a particular operation. Aircraft parking charges are not generally included.

As shown in Figure 18, the turnaround costs at YZF are substantially lower than the average of the comparator airports. The fees at Whitehorse and Iqaluit are set well below cost recovery, and those at Fort McMurray are very high, driven largely by its major capital expansion in the past few years. These outliers have been removed and the results, shown graphically in Figure 19, indicate that **the turnaround costs at YZF are between 315% and 460% lower than the average.**

⁵³ Airport fees and charges schedules as at March 2015.

Figure 18. Aircraft Turnaround Costs at Comparator Airports

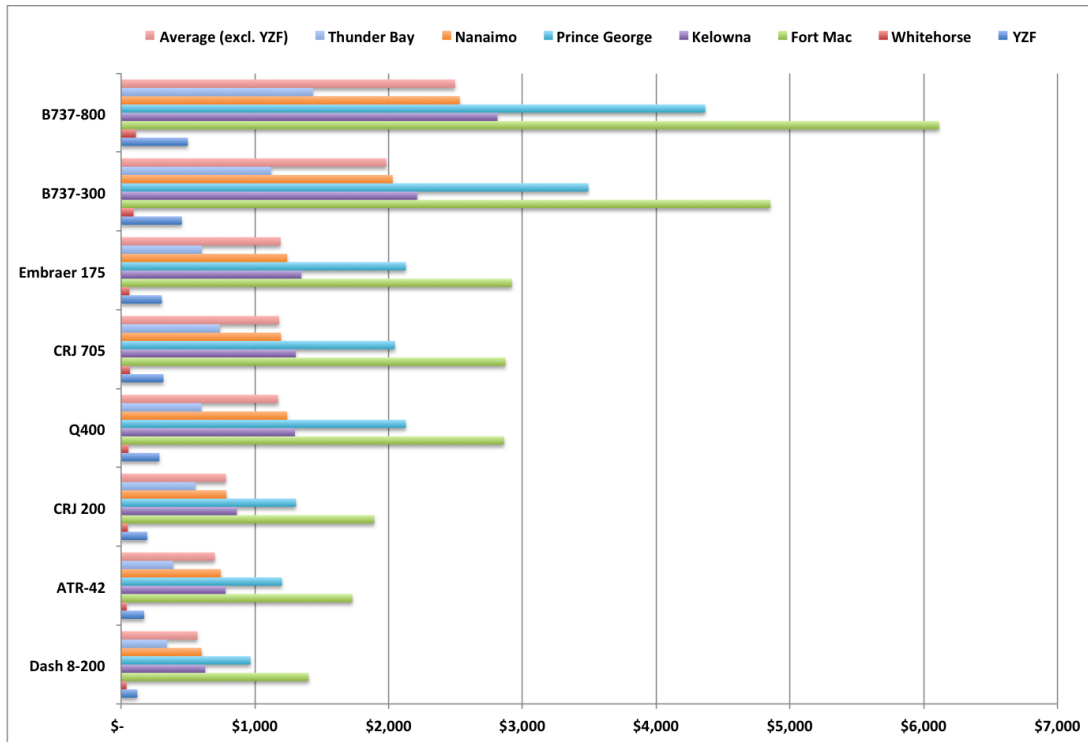
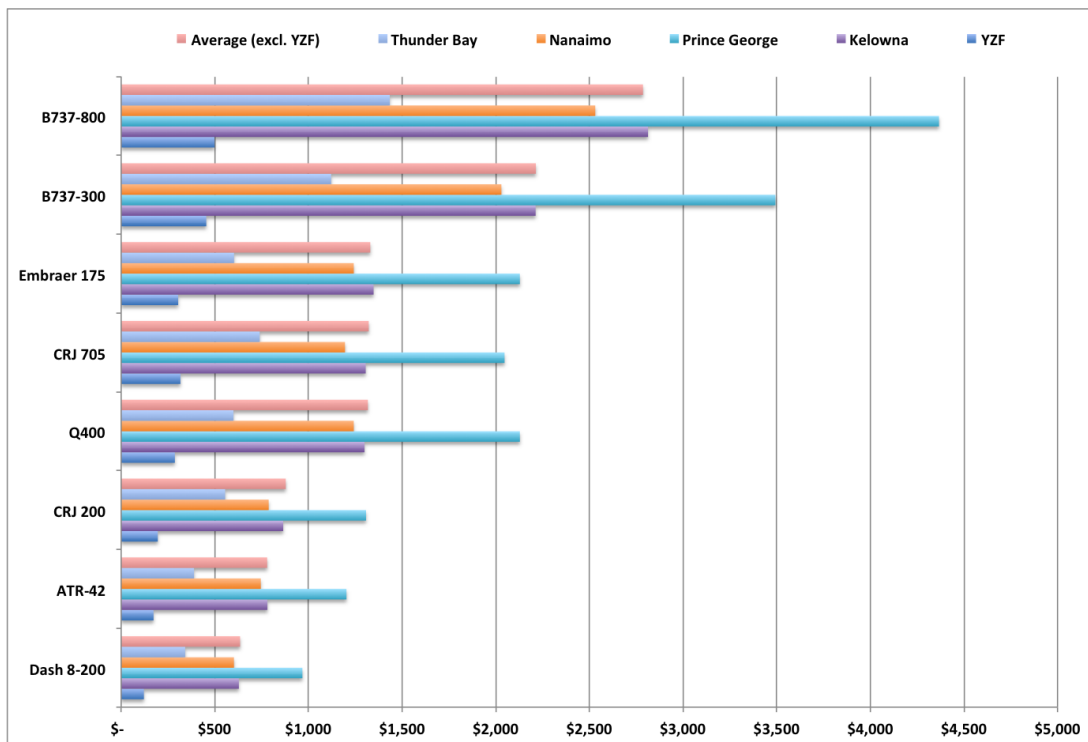


Figure 19. Aircraft Turnaround Costs at Comparator Airports (excluding outliers)



Taking two commonly used airplane types at YZF – the Dash-8 and Boeing 737- the analysis shows that YZF could increase its aeronautical charges by a factor of five (5) and still only be around the average of the other benchmarked airports (including the AIF where charged): and this is true for both the full benchmarked list or when the “outliers” are removed.⁵⁴ With the AIF removed from the turnaround cost, the average aeronautical fees among the benchmarked airports are about 2.5 times higher than at YZF. These figures are important indicators of where and how YZF might achieve financial self-sufficiency and will be used in later analysis.

4.9. LONG-TERM CAPITAL PLAN

YZF has developed a list of its potential capital needs which was last updated in late 2014 and is reproduced in Table 5. Of note is that it is anticipated that in the next 10 years approximately \$45M of capital improvements will be required, and looking out beyond 2024 a further \$140M could be required, including a major ATB build.

Table 5. Long Term Capital Program - YZF

Project	Description of Work	Estimated Cost ('000)	Likely Required	
			2015~2024	2025~2034
Air Terminal Building - Furnishings & Fixtures	replacement of furnishings and fixtures	\$250	✓	
New ATB	new 7000 sq. m. ATB	\$125,000		✓
Combined Services Building	mid-life upgrade	\$7,000	✓	
Air Terminal Building Baggage/CATSA	changes to meet regulations (funded by others)	\$2,000	✓	
Airport Sand Storage Building	mid-life upgrade	\$750	✓	
Air Terminal Building - Bridges	Aircraft passenger bridges	\$1,500	✓	
Air Terminal Building - Improvements	Revolving Doors and Gate 4/Old Kitchen	\$500	✓	
Air Terminal Building - Improvements	Common Use Terminals	\$350	✓	
Parking Lot Replacement	New Parking Lot	\$1,000	✓	
Parking Lot Improvements	Upgrade Parking Controls	\$350	✓	
ATB	ATB refurbishments	\$10,000	✓	
Airport Perimeter Fencing Replacement	perimeter fencing replacement - replace as needed	\$200	✓	
FEC Replacement (ACAP)	replacement of Field Electric Centre	\$1,100	✓	
PAPI 09	replacement of visual aid for aircraft	\$100	✓	
PAPI 15	replacement of visual aid for aircraft	\$100	✓	
PAPI 27	replacement of visual aid for aircraft	\$100	✓	
Relocate/Replace Airside Signage	replacement of signage for aircraft as per TP 312	\$100	✓	
Runway 09/27 Edge Lighting Upgrade (ACAP)	replacement of existing lighting system to TP 312	\$850	✓	
Runway 15/33 Edge Lighting Upgrade (ACAP)	replacement of existing lighting system to TP 312	\$1,000	✓	
Runway identification Lights 15	replacement of visual aid for aircraft	\$50	✓	
Taxi H/F Lighting	new taxiway lighting	\$250	✓	
Taxi J/K lighting	new taxiway lighting	\$200	✓	
Crash Truck, Airports (ACAP)	new 6000 L crash truck for airport firehall	\$1,000	✓	
Tractor	new tractor	\$250	✓	
Sweeper, Airports	new sweeper	\$300	✓	
Sweeper, Airports	incremental sweeper	\$300	✓	
Loader, Airports	new loader	\$275	✓	
Plow Truck, Airports	new plow truck	\$250	✓	
Plow Truck, Airports	new plow truck	\$275	✓	
Snow Blower, Airports	new snow blower	\$600	✓	
Pre wetter/chemical spreader	add on to snow plow	\$80	✓	
Apron Overlay	asphalt resurface of apron - apron area approximately 1000x 500 ft	\$1,520	✓	
Apron Expansion	expand apron	\$3,000	✓	
Parallel Taxiway	parallel taxiway, phase 1	\$16,200		✓
Runway 09-27 Resurfacing Overlay	asphalt resurface of runway - 5000 x 150 asphalt	\$9,100	✓	
TOTAL		\$185,900	\$44,700	\$141,200

Source: GNWT Airport Division, September 2015

⁵⁴ For the Dash 8-200, the factor is 4.70 for the full benchmarked list, and 5.23 for the reduced list. For the B737-800 the equivalent figures are 5.00 and 5.59. Thus a factor of 5 would be a conservative increase to raise charges to the average (including an AIF or equivalent).

Beyond these identified needs, there are also developing issues that will have implications for capital investments at YZF including:

1. Runway end Safety Areas (RESA) are not included in the above listing as they are not yet a regulated requirement but this may well change. With an anticipated \$5M price tag if they are required by future Canadian Aviation Regulations then GNWT will need to look for federal funding to implement.
2. Some parking improvements will be required to enable the airport operator to accommodate growth and capture additional offsetting revenues. Depending on the final design these investment (within the next five years) would likely cost \$500K.
3. An opportunity has been identified to improve air cargo handling in the space occupied by the old maintenance garage. GNWT is working with TC to fund the demolition of the current building. An order of magnitude cost of \$700K is anticipated for this project.
4. Opening the west side of the airfield is seen to have major benefits, as is the inclusion of municipal water and sewer on the entire property. This is a major undertaking and has not been costed to date.

4.10. SUMMARY SWOTCH

The operation and facilities at Yellowknife Airport have many strengths. The airport also faces many challenges. Below is a summary of the strengths, weaknesses, opportunities, threats and challenges as identified by the Consultants and staff of the GNWT

STRENGTHS • YZF is a critical component of the NWT transportation system, for residents and businesses • Access to decision makers • Access to corporate services through other DOT departments provides economies of scale & scope • Partnerships with other departments (i.e. combined services building) • Good morale • In aviation regulatory compliance • Able to access to ACAP funding • Adequate passenger facilities (customs, retail, F&B, car rentals, etc.) • Availability of cargo processing facilities and services • Committed airport management • Runway in good condition • Terminal in good condition • Strong / healthy O/D passenger traffic • Some of the lowest fees in the country	WEAKNESSES • Aeronautical fees not in step with industry norms • Significant operating losses (\$) each year • No clear picture of full cost of operating YZF (cost of other DOT services not included) • Potential surplus revenues go to GNWT general revenues vs. airport creating disincentive to investment • Limited commercial focus not within purview of airport general manager • Matrix structure could lead to a disconnect between HQ and local airport management without strong communication and information flows • Majority of based aircraft are piston (and thus not a large revenue generator) • Runway too short for larger jet aircraft with economic international payloads • No clear picture of amount of cargo processed each year • Ineffective procurement process • Land leases not driven by current market prices • Legacy IT and equipment • Funds not available to pay for long term planning • Must compete with other GNWT priorities for capital funding
OPPORTUNITIES • Margin to implement an AIF/PFC • Margin to increase aeronautical fees • Prospects in med-long term for more mining projects in north generally positive leading to more air travel • Change in governance structure might increase access to external funding for capital programs (NBCF) • Potential for logistics centre / cargo hub for the region • Additional cross training of ERS and airfield maintenance staff • Space for runway extensions • Land available for commercial development • Potential for international flights • Increase in tourism • Opportunities exist to make the passenger experience more enjoyable (amenities) • Airside services	THREATS & CHALLENGES • Political will to effect change • Bureaucratic inertia • Financial performance of regional and northern airlines • Pressure from airlines on airports to contain costs & keep fees low • Increased regulatory burden • Significant change requires political will • Downturn in the mining industry • The fluctuations in the economy and the GNWT budget makes planning more difficult • Political considerations prevents the airport from running on commercial considerations

5. CASE STUDIES

5.1. CASE STUDIES OF COMPARABLE AIRPORTS

This benchmarking section compares the operations of several other similar airports across Canada with that at YZF. The airports included in this ‘benchmark analysis’ are: Kelowna International Airport (YLW), Iqaluit International Airport (YFB), Whitehorse (YXY), Nanaimo (YCD), Fort McMurray (YMM), and Sydney (YQY). The comparable airports were chosen based on a range of factors including but not limited to: size / traffic (passengers, movements, cargo), financial, geographic location, and current governance structure.

The information provided is based on prior studies completed for GNWT, publicly available information from airport websites, directly from the comparable airports, and from the Consultant’s experience and proprietary databases.

5.1.1. KELOWNA INTERNATIONAL AIRPORT (YLW)

The Kelowna International Airport (YLW) is one of the 26 airports included in the National Airports System. It is owned by the Federal Government, and operated under a long-term lease agreement (expiring in 2034) by the City of Kelowna. It is in somewhat of a unique position in that it is the only one of the NAS airports that will never be required to pay rent under its lease arrangement. YLW is Canada’s 11th busiest airport based on passenger traffic (2014).

The airport is located in the Okanagan Valley in British Columbia. It is a four hour drive, or 1 hour flight to Vancouver.

The airport serves approximately 1.6 million passengers a year, with 64 daily non-stop commercial flights to Vancouver, Calgary, Toronto, Seattle, Victoria, Prince George, Edmonton and Red Deer. There is also seasonal service to Las Vegas, Phoenix, Los Cabos, Puerto Vallarta, and Cancun. Airlines serving YLW include: Air Canada, Air Transat, Air North, Alaska Airlines, Central Mountain Air, North Western Air Lease, Pacific Coastal, and WestJet. Aviation and FBO Services such as aircraft maintenance, ramp services, and fuelling are provided by eight organizations. The airport also hosts a flying club and a flight training school. Canada Customs is available 24 hours a day at both the terminal and the Shell Aero Centre. There is one 8,900’ feet runway at YLW (2,713 m).

The Airport has been growing steadily since the 1990s, and the City adopted a \$20M expansion program in 1998 to prepare for 2011 forecasted passenger volumes. The airport’s expansion programs are funded by an Airport Improvement Fee (AIF) charged to departing passengers (currently \$15).

The airport continues to grow, and the City has put in place another expansion program (\$55.6M), phased to coincide with passenger traffic demand. This “Drive to 1.6 Million Passengers Development Program” includes: an international arrivals hall (completed in 2012), a runway overlay, relocating and upgrading utilities, upgrading the outbound baggage system, improving the Highway 97 intersection, expanding Apron 1 and the

associated taxiway, a new International Arrivals Concourse, and renovations to the existing arrivals area. YLW has recently engaged consultants to update its Master Plan.

As shown in Figure 20, the Airport Director reports to the City Manager. City Council essentially acts in the same capacity as a Board of Directors of an Airport Authority, in that they set strategic direction, and approve budgets, rates and leases.

An Airport Advisory Committee, which is a “Select” Committee of Council was formed to facilitate participation from local government, business and community interests in the airport catchment area on matters associated with the development of the Airport. The Airport Advisory Committee meets twice a year, and its mandate is to review, report and advise Council on matters concerning the long-term development of the Airport. The Committee does not have decision making authority. The Committee is chaired by the Mayor and currently includes representatives from City Council (x1), the City of Kelowna community at large (x2), the aviation industry (x1), one member nominated by each of the Districts and cities in the catchment area (x6), the Chambers of Commerce in the catchment area (x4), Westbank First Nations (x1), as well as local economic development and tourism agencies (x2). Members serve a term of four years (to run concurrent with the Council term). Members serve without remuneration. The City Manager and the Airport Director attend the meetings in a resource capacity, and airport staff provide support for the Committee to undertake work assigned by Council. The Advisory Committee is a very effective means of engaging and communicating with the larger community within the catchment area. Council is also more apt to approve recommendations that have been brought forth by Airport staff if they have been first vetted and supported by the Committee.

Kelowna has considered alternate governance models over the years, however the Airport is so successful that the City is reluctant to give it up, and despite the inherent bureaucracy associated with being run within a municipal department, and the risks associated with political turnover every four years, YLW has managed to put in place systems and processes to mitigate these risks and allow it sufficient flexibility to operate on a more commercial basis in key areas. An example of this is a clause in the bylaws that provides the Airport Director with the discretionary ability to reduce fees charged to new carriers (e.g., in the first year or two), therefore there is no delay in negotiations for new air services. Airport staff are also quick to educate new Council members, highlighting the economic impacts and benefits of the airport. As the airport is financially self-sufficient and does not pose a burden on the taxpayer, there is much support for YLW among Council.

In the early 1990s, YLW had an operating loss of approximately \$650,000 a year. The situation today is quite the opposite. One of the first things done to improve the situation was to combine firefighting with airport maintenance duties (i.e., staff were cross-trained). This resulted in significant salary savings. Another significant cost reduction measure was to outsource building and technical maintenance (a wide range of services including building and systems operations and maintenance, janitorial, snow removal, help desk and management services) via a negotiated master service contract. YLW was the first airport in North America to do this, and it has resulted in savings of approximately \$750,000 a year. Bouygues E&S is the current service provider and was awarded a long-term contract in 2013.

A review of YLW's financial statements (2013 and 2012) shows that the airport is achieving a positive net income, as well as a positive EBIDTA even when AIF revenues are excluded i.e., it is financially self-sufficient, and not reliant on tax dollars. YLW's operations are able to support both its operating and capital program, including debt service. Even though YLW is part of the City, the airport pays its share for corporate services provided by other departments (a % of overall operating budget), and they also make payments in lieu of taxes (PILT). The City however takes on other risks and liabilities associated with airport ownership such as insurance.

YLW is known for being a low cost airport with economical fees & charges economical. Airport Fees Bylaw No. 7982⁵⁵ sets the fees for use of YLW terminal space and lands, including aircraft landing, aircraft parking, fuel concession, air terminal building space, and the airport improvement fee. Any changes to the aeronautical fees and the AIF are vetted through the Advisory Council and the Airline Consultative Committee before being proposed to Council.

YLW has had an AIF since the late 1990's. It was one of the first airports (along with YYC) to sign an agreement with the airlines, through ATAC. The AIF revenue goes directly to fund airport capital improvements.

While YLW technically has access to infrastructure funding through the Building Canada Fund (BCF) as the airport is financially self-sufficient, the City uses BCF funding for other infrastructure priorities.

YLW's focus is on non-aeronautical revenue generation. YLW currently has a 60/40 split (in favour of non-aeronautical revenue) which is the opposite of many airports. A lot of time is spent on developing the concessions program at the airport e.g., "Farm to Flight" new this year. YLW has seen the per enplaned passenger spend rate go from \$8 five years ago, to a current \$12.50; the North American average is \$5.50. YLW would like to see this rise to \$22-24 as non-aeronautical revenue provides a steadier stream of income than aeronautical revenues, and it helps keep aeronautical fees low.

While the airport never had a lot of excess land available to develop, they have made the best use of what was available. Of note is that in British Columbia there are regulations regarding the disposition of public land e.g. have to post in newspapers and go to Council for recommendations on new leases (including leases for airlines). Council can delegate to airport management, but they choose not to for public accountability reasons. This process does not slow the airport down as airport management are fully aware of the deadlines and meets them.

There are 38.5 full time equivalent staff employed at the airport. This does not include the staff employed by Bouygues E&S, or staff from other municipal departments who provide corporate and administrative services such as finance, HR and procurement.

⁵⁵ Source:

<http://www.kelowna.ca/CityPage/Docs/PDFs%5C%5CBylaws%5CAirport%20Fees%20Bylaw%20No%207982.pdf?t=055956591>

Figure 20. YLW Organizational Chart



Highlights

- NAS airport
- Owned and operated by the public sector (municipality)
 - Only airport owned by City and no competing interests
- YLW is now financially self-sufficient (operating and capital) but in 1990s lost over \$0.5 million annually
- Capital program approved by Council and airport debt limits the City's ability to raise other debt:
 - Early adopter of AIF to fund capital improvements
 - Eligible for BCF but City uses these funds elsewhere
 - YLW's focus is on commercial revenue generation both in terminal and land development
- Similar to YZF, YLW has access to services from other departments - YLW pays for these services
- Combined some airport trades
- Outsourced M&E and Janitorial functions
- Board comprised of regional mayors
- Established Air Service Action Group

5.1.2. IQUALUIT INTERNATIONAL AIRPORT (YFB)

The Iqaluit International Airport (YFB) was transferred to the NWT Government in 1995 under the National Airports Policy (NAP). It is one of the 26 airports included in the National Airports System, and is also considered an Arctic Airport under NAP. The Iqaluit International Airport is currently owned and operated by the Government Nunavut (GN).

The airport serves approximately 120,000 passengers a year, with daily non-stop commercial flights to: Arctic Bay, Cape Dorset, Chesterfield Inlet, Clyde River, Coral Harbour, Gander, Happy Valley Goose Bay, Hall Beach, Igloolik, Kangerlussuaq, Kimmirut, Kuujuaq, Mary River, Montreal, Narsarsuaq, Nuuk, Ottawa, Pangnirtung, Pond Inlet, Qikiqtarjuaq, Rankin Inlet, Resolute, Yellowknife), and Kuujuaq. There is also seasonal service to Copenhagen, Halifax, and St. John's. These flights are provided by several carriers including Air Greenland, Air Nunavut, Canadian North, Exploits Valley Air Services, First Air, and Nolinor Aviation. There are also several charter carriers.

The airport is not financially self-sustaining on an operating or capital basis. Additionally, the airport requires significant investment to support the territory's growing population and air transportation demand, as well as to replace aging infrastructure. The runway is at the end of its life cycle; the terminal building can no longer handle the volume of air traffic (aircraft and passengers), the runway lighting and other safety related systems are increasingly difficult to maintain; and the combined services building is too small to house the equipment. The GN determined that with the governance model at the time, it would take approximately 25 years to finance and complete the capital works required. After a business case and analysis was completed, it was determined that a P3 project was the most effective means to achieve the upgrades.



In 2012, the GN issued an RFP for the design, construction, financing, operations and maintenance of the airport, including a new LEED certified terminal building (~10,000 m²), a new combined services building (~ 4500m²), and improvements to airside infrastructure (incl. a second taxiway, and repaving of the apron and runway). Arctic Infrastructure Partners

(AIP) were successful in their bid to operate and maintain the existing airport during construction of the new airport, and for 30 years after construction is finished in 2017. The GN will continue to own the airport during the entire period. The project, being delivered under the design, build, finance, operate and maintain (DBOFM) model is expected to realize significant financial benefits (estimated \$100M less than if the GN undertook the project using a traditional approach), as well as other benefits such as improved airport conveniences, enhanced safety, more efficient and reliable operations, education and training opportunities for Inuit beneficiaries, and the ability to expand the airport in the future without significant work.⁵⁶ The Government of Nunavut is

⁵⁶ Source: www.edt.gov.nu.ca

contributing \$68.7M of the \$298.5M project, PPP Canada is contributing \$72.8M, and AIP is financing the remainder through debt and equity.

Unlike some P3s, the construction is being paid on completion milestones versus being amortized over the concession period. The GN is therefore paying AIP to operate the airport based on “availability payments”. AIP has revenue opportunities within the terminal building (e.g., retail, food and beverage concessions), energy savings, etc. Anything related to air carrier operations however is retained by the GN (the GN continues to set the aeronautical fees and takes the revenue risk). The GN also retains control of leases, while AIP manages the day to day operations. AIP is also contractually obligated to maintain the physical characteristics of the airport, and cannot change these (e.g., runway length) without the approval of the GN.

The complex contract offers little opportunity for the private sector partner for much profit as the GN was quite concerned about overall impact on the territorial economy. This is why the GN has retained much control over many things including aeronautical fees and charges. The GN has also learned that given the complexity of the contract, oversight by the government, by a team experienced in airport operations, is essential.

Highlights

- NAS Airport owned by GN
- Current traffic about 25% of YZF
- Not financially self sustaining and requires extensive infrastructure investment which compete with other social priorities
- Recently entered into a P3 arrangement with AIP to upgrade, operate and develop the airport on a long-term lease basis
- \$300M CapEx with \$70M from both GN and P3 Canada
- AIP has limited commercial, non-aero revenue potential
- No AIF/PFF
- Airline Fee setting authority retained by GN

5.1.3. WHITEHORSE AIRPORT

The Erik Nielsen Whitehorse International Airport (YXY) was transferred to the Government of Yukon under the National Airports Policy (NAP). It is one of the 26 airports included in the National Airports System, and is also considered an Arctic Airport under NAP. YXY is currently owned and operated by the Government of Yukon / Highways and Public Works.

The airport charges landing fees (domestic and international) and aircraft parking fees (> 6 hours), but does not charge general terminal fees⁵⁷. They also charge fees for vehicle parking, air terminal building space rentals, equipment rentals (bridge and PA system), and land leases.

A recent extension to the runway has enabled larger aircraft to land at YXY, including Condor from Germany).

⁵⁷ Source: http://www.gov.yk.ca/yxy/pdf/atb_ENWIA_rates_fees_Jan_1_2015.pdf

Highlights

- NAS airport owned and operated by the GY
- About 2/3 traffic of YZF
- As policy, maintains a low level of landing fees
- No AIF/PFF

5.1.4. NANAIMO AIRPORT (YCD)

The Nanaimo Airport Commission was incorporated in August of 1990 as a not-for-profit authority under the *Canada Corporations Act – Part II*, and is registered under the *Society Act* (British Columbia). In April of 1992, the Commission assumed management and operation of the airport under a 30-year lease from the Federal Government. The Commission was granted fee simple title to the Nanaimo Airport lands through the NAP transfer Initiative in December 1996.

The Nanaimo Airport Commission is governed by a Board of Directors who are responsible to its corporate mandate, overall function of the Airport, and the strategic direction for airport developments. The Commission is comprised of a total of nine Directors including the past Chair, all appointed by the Commission. Four Directors are selected by the Commission to represent the Community at large, and the remaining five appointments are a result of nominations from the City of Nanaimo, the Regional District of Nanaimo, the Cowichan Valley Regional District, the Town of Ladysmith, and the Greater Nanaimo Chamber of Commerce. Under the direction from the Board, the President / CEO manages the affairs of the Commission and the daily operations of YCD. The Board has several committees and working groups, including route development, and land use / environmental.

The airport's mission statement, as published on its website, is "to provide a safe, efficient and financially viable airport, offering excellent services and value to all users while fostering economic development".

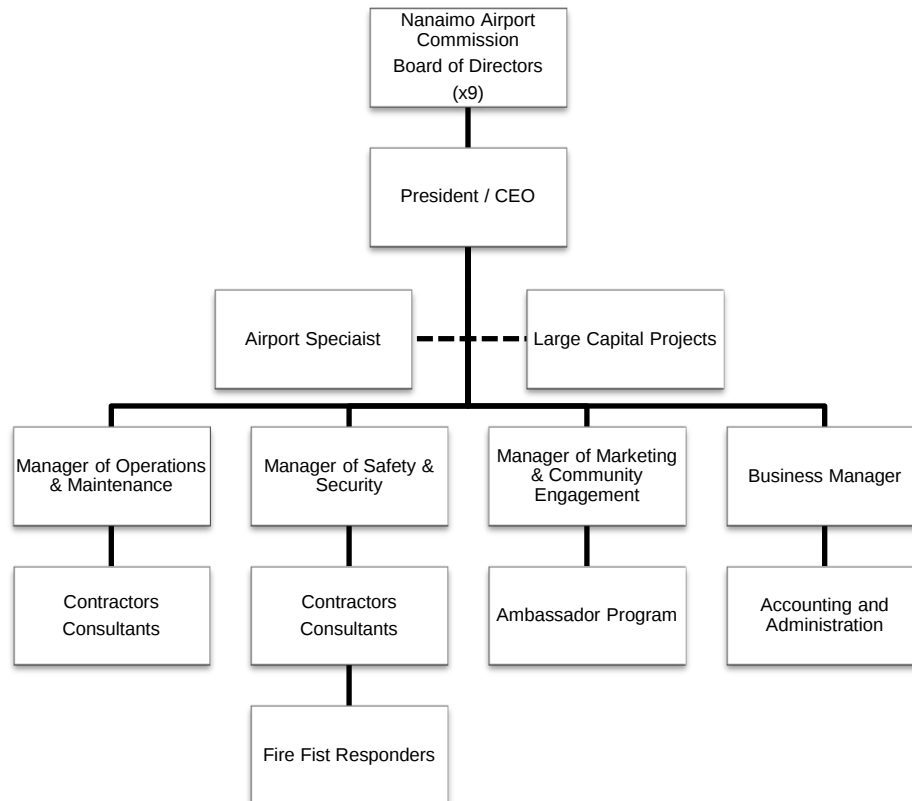
The airport saw 270,426 passengers in 2014 (a 20% increase over 2013). There are four air carriers providing scheduled passenger service from YCD (Air Canada, WestJet, Island Express, and Kenmore Air).

The airport offers a broad range of airport and facilities and services built around a 6,602' x 150' runway. The runway was extended in 2010 from its previous 5,000'. This extension has increased weather reliability to over 98% (from 74%), provides access for larger aircraft, and has resulted in a significant increase in passenger traffic. The \$16.4M project was funded in part through the Building Canada Fund. At the same time, YCD partnered with Highways to put in lights to improve safety in/out of the airport.

The existing terminal, originally constructed in 1990, was expanded in 2010 and is approximately 2700 m². Phase 2 of the expansion program which included terminal and groundside construction activities was completed in 2011. YCD continues to grow, and is planning another expansion to the terminal. The funding for this \$11M project is planned to come from the federal and provincial government through the New Building Canada Fund (if successful; \$7.3M), and by the airport (\$3.7 million).

There are 11 staff at the airport, as shown in the organizational chart below. All YCD staff are salaried. There are no unionized employees

Figure 21. YCD Organizational Chart



ENEX (the fueller at YCD) provides YCD with a variety of contracted services including parking, building maintenance (janitorial), landscaping and vegetation control, winter maintenance, security, airside maintenance, and fire response. YCD has a unique, minimum guarantee type of contractual arrangement with Enex which benefits both parties. YCD guarantees that Enex will always cover their base costs by hiring Enex personnel to perform services for the airport. If Enex personnel have to be on-site to provide fuelling services, then YCD pays a lower hourly rate than when the Enex personnel are on-site only to provide services to YCD. If Enex earns more than a specific amount, then YCD receives a percentage. Airport management indicate that this arrangement has increased the level of service such that they now have 3 flights a day to Calgary. This in turn has resulted in increased fuel sales (gone from 100,000 L of fuel / year to over 2.5M litres) which benefits Enex as the fuel provider, and YCD which receives a percentage of sales. The increased passenger traffic has also resulted in increased revenues to YCD through passenger fees, concessions revenues, etc.

YCD management is always looking for innovative ways to partner with its tenants to the benefit of both parties. Another example is connecting two tenants to facilitate a business arrangement, and then paving part of the apron. This resulted in the cargo capacity at the airport being doubled for a very small investment on the part of YCD. A third example is partnering with the flying club and the fuelling company to move AvGas

off the main apron. YCD paved the area which resulted in the separation of small and large aircraft (particularly important during peak periods), and flying club members having access to quality fuel at a discounted rate.

A review of the 2013 Annual Report shows a financial surplus in both 2012 and 2013 (\$801.9K in 2013), including the passenger facility fee (PFF). A PFF (currently \$10 per departing passenger) is charged so that if necessary, revenues can be used to offset airport operational costs as well as capital costs.

Highlights

- Commission originally operated YCD on long-term lease which transitioned to ownership in 1996
- Nine member Board, all appointed by the Board with professional and regional representation
- Decisions taken with a business partnership perspective;
- 270,000 pax in 2014
- Financially self sufficient on an operational basis and without government guarantees
- Operating Surplus of \$800K
- PFF charged (collected by the carriers)
- Recent terminal and runway extensions partially funded by the BCF

5.1.5. FORT McMURRAY AIRPORT (YMM)

The Fort McMurray Airport is considered a regional / local airport in the NAP. In 1999, the Regional Municipality of Wood Buffalo created the Regional Airport Commission to take over ownership of the airport from the federal government. In 2009, the Fort McMurray Airport was incorporated as an Airport Authority, with the first Board of Directors for the Authority being formed in January 2010. Under Alberta legislation (*Regional Airports Authorities Act*), the Airport Authority is legally and financially independent, and operates as a not-for-profit corporation.

One of the primary drivers behind the move from a Commission to an Authority was to allow the airport access to funding through Alberta Capital Finance Corporation at a much lower interest rate than that of a private bank for the planned airport expansion. While the Part 9 corporation (a non-profit group that operates at arm's length from the municipality) was technically able to access those funds, the municipality's ability to incur debt for its own capital projects would be affected. By removing the airport operations from the indirect control of the municipality, it relieved the potential for the general public to perceive the municipality as accountable for the airport's performance as the parent corporation. It also eliminated any time, cost and workload burden on council and administration related to the governance relationship in terms of board participation and review. If the transition to an Airport Authority was not made, the airport expansion project would have been delayed indefinitely due to the economic conditions at the time. In accordance with the Act, all leases and contracts were transferred without having to be re-written.

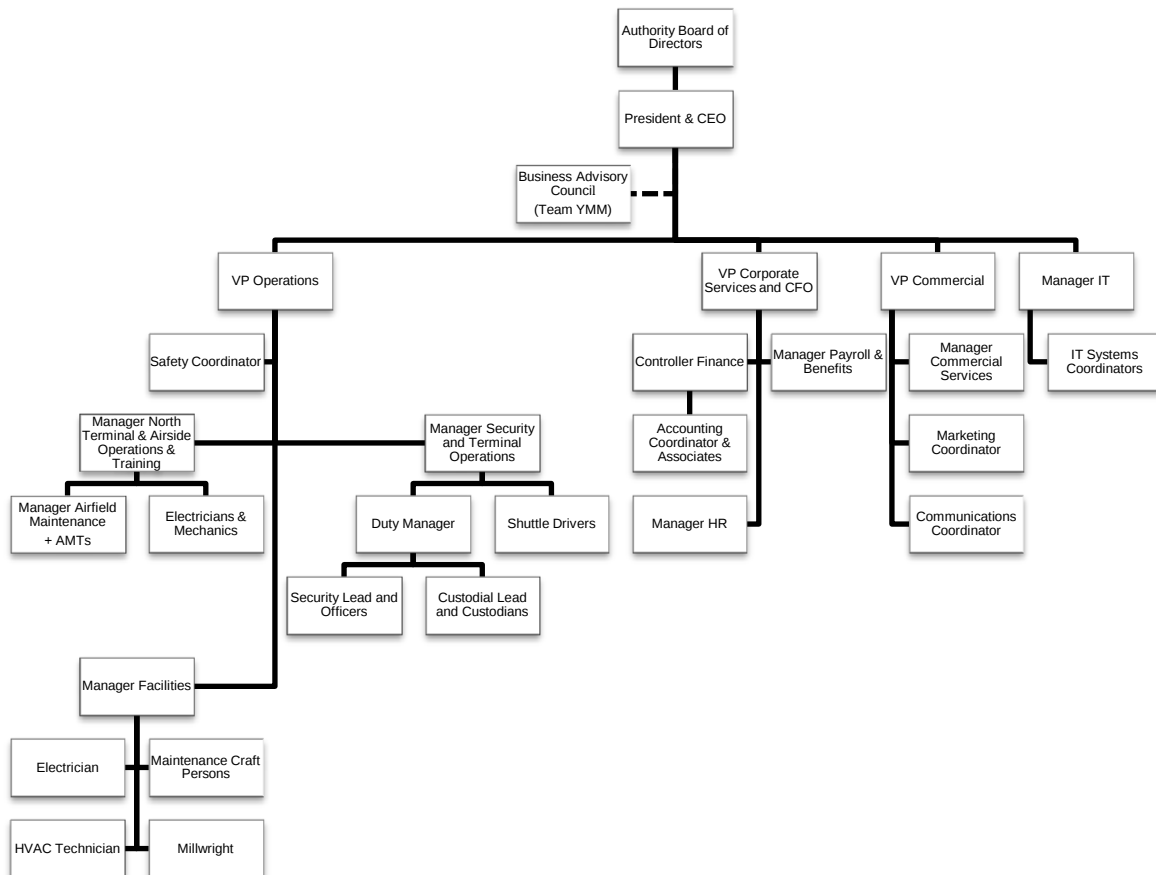
The Authority's Board comprises 10 Directors; two are appointed by the Oil Sands Community Alliance, two by the Fort McMurray Chamber of Commerce, one by CUPE,

three by the Regional Municipality of Wood Buffalo, and two by the Authority. The Board has three standing committees: governance, finance and audit, and capital project.

YMM works closely with the Wood Buffalo business community through its Business Advisory Council which includes 22 local business leaders who provide YMM direction on air service and airport improvements that would benefit the region economically.

Scheduled passenger service is provided by major air carriers including Air Canada, Air Canada Express, Northwestern Air, WestJet, and WestJet Encore. Charters are available through McMurray Aviation and Sunwing. In 2014, the airport saw 1.3 million passengers, a 9.5% increase from 2013. YMM is now one of the top 15 busiest airports in Canada. YMM seeks out strategic airlines, business and municipal organizations and other stakeholders with whom to collaborate to establish new air services.

Figure 22. YMM Organizational Chart



In June of 2014, YMM opened its new 15,000 m2 terminal building that can serve up to 1.5 million passengers. YMM focuses on providing first class services to its passengers

and has outfitted the new terminal with amenities such as electrical and USB outlets in every holdroom seat, transit and parking services, family and children's areas, pet relief area, and an outdoor courtyard. The old terminal on the north side of the airfield (now called the North Terminal) has been renovated and now serves exclusively, workforce charters, corporate fliers and air cargo.

Air cargo is an important link in the supply chain and logistics for the oil and gas industry. Dedicated air cargo flights handle over half the cargo at YMM while AC and WS carry the rest in the belly of scheduled passenger flights. Currently air cargo is handled out of the original terminal building; however a new third-party operating air cargo building with an expanded apron is planned to concentrate cargo operations in one area, with larger freight aircraft.

YMM hosts over 25 workforce charter carriers, with several FBOs for aircraft handling, refuelling and executive flight lounges. YMM is also home to general aviation traffic from flight schools, companies providing air ambulance services and search and rescue, and recreational flyers.

The airport has one runway 7,500 feet long with plans for an extension. Air navigation services are provided from the on-site control tower.

YMM has 1,267 acres (512 ha) of land available for commercial development; divided into seven commercial parks. This commercial land is made available for growing businesses in the Region, while also creating stable, non-aeronautical revenue streams for the airport.

A review of YMM's 2014 financial statements shows significantly positive EBITDA. YMM covers its capital expenditures by charging an airport improvement fee to scheduled passengers (currently at \$30), and an AIF equivalent to charter passengers.

Highlights

- YMM is designated a Regional (Non-NAS) Airport even though it is larger (by traffic) than many of the NAS airports
- YMM found that moving to an airport authority (from a municipal governance) model provided it with access to essential capital, as well as adding rigour and business focus to airport operations
- Its move to an AA model also benefitted Wood Buffalo by taking the airport capital program outside the municipality's consolidated debt, and changing the public's perception of the municipality's responsibility for airport operations and performance
- YMM established a Business Advisory Council as an important tool to help identify air service and economic development needs
- Air cargo is an important part of the YMM mix, and an important element in the supply chain and logistics for the resource sector
- YMM implemented an AIF, and charges an equivalent to oil-sands charter operations

5.1.6. THUNDER BAY AIRPORT (YQT)

The Thunder Bay Airport (YQT) - originally named the Fort William Municipal Airport – was opened in 1938, replacing an earlier local flying club facility dating from 1927. During World War II it became the home of No. 2 Elementary Flying Training School, part of the British Commonwealth Air Training Plan. The airport was also used as a base for test flights of fighter aircraft being built at the nearby Canadian Car and Foundry factory.

After the War, the federal government purchased the airport and bought an adjacent parcel of land to extend the runways and thereby increasing the land base to its present 790 acres (320 hectares). In the late 1940s the civilian use of the airport increased and regularly scheduled flights were initiated by Trans Canada Airlines in 1947.⁵⁸ By the mid-1990s the airport was transformed with the construction of a new airport terminal building, including two jetways, a large food court and retail concessions.

The airport was devolved from Transport Canada control to the Thunder Bay International Airports Authority, a locally based, federally incorporated, non-share capital corporation under a 60-year Ground Lease as part of the National Airports Policy (NAP) on Sept 1st, 1997.⁵⁹

Board composition is based on the NAP that calls for a broad range of community stakeholders. Specifically, TBIAA's Board is comprised of representation from the Governments of Canada, Ontario, Municipality of Thunder Bay, Chamber of Commerce, District Labour Council and at-large.⁶⁰

In 2014, the airport handled over 776,945 passengers, and 100,483 aircraft movements.⁶¹

The airport hosts a significant general aviation component, with a number of on-site corporate, charter, maintenance, training and speciality aviation services companies. Some 110 fixed and rotary-wing aircraft are presently based at the Airport, although this number rises considerably during the busy summer season, especially in support of those forestry, mining and tourism interests which are based throughout north-western Ontario.⁶²

Financially, TBIAA generated \$10.76M in Consolidated Revenue, and \$9.34M in expenditures, leaving a surplus for the year of \$1.42M. The airport spent an average of \$3M annually on major capital projects in the last five years (\$2.5M in 2014). TBIAA is exempt from corporate income tax for core airport operations; pays Grants in Lieu of Taxes to the host municipality (\$388,838 in 2014); and \$149,605 in Ground Rent to the Government of Canada. The Authority holds unrestricted reserves in excess of \$22M.⁶³

⁵⁸ The Economic Impact of the Thunder Bay International Airport, April 2012

⁵⁹ <http://www.tbairport.on.ca/annualreports.php>

⁶⁰ *ibid*

⁶¹ TBIAA Annual Report 2014

⁶² *ibid*

⁶³ *ibid*

The TBIAA has the ability – like other NAS Airports – to set its Fees & Charges at any level without reference to the federal government, subject to a 60-day public notice period obligation through its Ground Lease. Capital funds are raised via internal cash reserves or bank credit facilities. Unique among NAS airports, TBIAA does not collect an Airport Improvement Fee. The airport is not eligible for federal ACAP funding (as the property is Crown land) but has twice received Federal and Provincial funding in support of economic development based construction.⁶⁴

The Authority states that it exists to enable air related transportation as a major contributor to regional economic growth. This is interpreted to include, but not limited to:⁶⁵

1. Superior standards of safety and customer service at airports operated by the Authority;
2. Retention and expansion of airport related services and businesses;
3. Developing Thunder Bay as a centre for aerospace-related activities; and
4. Encouraging sustainable air services for Northwestern Ontario.

Like many of its NAS peers, the TBIAA operates with private sector financial discipline tempered by an awareness of the airport's economic generator role within the community: the non-share capital status of the Authority means that broader regional economic development goals also affect investment decisions. An active engagement strategy results in high levels of community support for important airport initiatives.

Also unique among this size of NAS airport, TBIAA currently has three active subsidiary companies; two wholly owned and one with a 50% partner. The first subsidiary was established in 1998. Although the TBIAA supported these companies with in-kind contributions, expertise and some administrative support, they are currently self-capitalized, i.e. the subsidiaries do not represent an on-going financial liability to TBIAA.

Highlights:

- NAS airport devolved from federal control in 1997
- Approximately 50% more traffic than Yellowknife
- YQT is financially self-sufficient (operating and capital) without an AIF
- Some airport trades combined to drive efficiency
- Has a Board representing a wide ranging slice of local community helping to solidify TBIAA's connection to, and gaining support from, the wider community for airport initiatives
- Unusually, has active subsidiary businesses at arms-length from the core airport operation

⁶⁴ <http://www.tbairport.on.ca/annualreports.php>

⁶⁵ *ibid*

5.1.7. J.A. DOUGLAS McCURDY SYDNEY AIRPORT (YQY)

The J.A. Douglas McCurdy Airport is considered a regional / local airport as part of the National Airports Policy (NAP), and ownership and operation was transferred from the Federal Government to the Sydney Airport Authority Inc. in October of 1997.

The airport is located a short (20 minute drive) from the Sydney downtown business district, and within an easy drive to other areas of Cape Breton Island.

The airport has two asphalt runways (Runway 07/25 is 7070' x 200' equipped with an ILS, and Runway 01/19 is 6000' x 150').

There are three airlines based at YQY providing scheduled passenger service (Air Canada Rouge (May – October) and Air Canada Express (Nov – April), WestJet seasonal to Toronto from May-Oct. and the Sydney – Halifax route starts July 15, 2015; Air St. Pierre operates in July and August. There are three charter carriers (Provincial Airlines, Skylink Express, Maritime Air Charters). Aircraft services available at the airport include aviation fuel, jet fuel, baggage handling, and hangarage. In addition to passenger services such as a restaurant, car rentals (x3) and taxi, the airport provides facilities and services to business travelers including a boardroom and business centre available for rental.

A \$2 million capital improvement program, including renovations to the terminal to expand seating capacity in the departure lounge, was completed in 2013. The renovations were funded by the Passenger Facilitation Fee (similar to an AIF), currently set at \$25.

The Airport Authority is governed by a Board of Directors. Board members are nominated, and after a review and recommendation by the Nominating Committee, are appointed by the Board. Board members can serve up to two consecutive four year terms. There are no political appointments on the Board. Board members are chosen based on their knowledge, skills and experience, and the needs of the Authority at the time. Given the small management team, Board members with experience in law, accounting, infrastructure, governance, engineering etc. are sought out. The Board not only provides oversight, but is available to provide professional expertise as required (e.g., the Infrastructure Committee may provide advice on capital projects). There are four Board committees: Executive, Governance, Finance and Audit, and Infrastructure. The audit and infrastructure committees meet before each Board meeting, and the governance committee meets every second month. The Board does not get involved with the day to day management of the airport, but is well informed regarding the airport's operations, and is focused on the mission which is to provide quality, safe and accessible aviation services and facilities for the travelling public and for the people and businesses of Cape Breton Island. The Board is very diligent in their role, particularly with respect to financials. Communication between



the Board and management is open and transparent. The Board meets 9-10 times a year.

The Airport operations are managed by a small full-time staff of fourteen including the CEO, three Managers, one Secretary and nine Maintenance Employees. In addition, four seasonal workers are hired for winter operations. This is approximately half the staff complement compared to pre-transfer under the NAP. Other than janitorial and security services, and the occasional consulting engagement, no services are contracted out. The airport has been financially self-sufficient for many years.

The airport saw 170,000 passengers in 2013 and almost 200,000 in 2014. This level of traffic (over 180,000) introduced the requirement for Aircraft Rescue & Firefighting Services (ARFF) under CARs 303. The Authority is currently implementing the measures to meet this requirement, including the purchase of equipment, the construction of a facility to house the equipment, training of existing staff, and potentially the hiring of additional staff.

Highlights

- YQY is governed under an Airport Authority model
- YQY has approximately half the passenger traffic of YZF
- YQY has half the staff of YZF
- YQY as a small airport is financially self-sufficient
- YQY has an PFF to help fund capital and operating expenditures
- Similar to YZF, access to ACAP for airside safety related investments is essential

5.1.8. KEY INFORMATION

Appendix C contains a summary table of key information for the benchmarked airports.

5.2. CASE STUDIES FROM OTHER MODES AND INFRASTRUCTURE INTENSE INDUSTRIES

Below are case studies of comparable organizations in other transportation sectors or intense industries that have adopted enhanced governance practices. These case studies are based on suitable options for comparative research and identification of best practices, as well as available documentation.

5.2.1. PORT OF TROIS-RIVIÈRES

The City of Trois-Rivières is on the north shore of the Saint-Lawrence River, strategically placed between Montreal and Québec City. The Port has a long history – it is celebrating 133 years in 2015: the Act that created the Corporation of the Harbour Commissioners of Trois-Rivières, referred to as the Harbour Commission, was passed in May 1882. Over time, the port has been overseen successively by the Harbour Commission, the National Harbours Board, the Canada Ports Corporation (from 1983) and the Trois-Rivières Port Authority since 1999.

The Harbour Commission, at the time of its creation, acquired the docks and warehouses and was in charge of modernizing port facilities. The Port became public and was managed by local people. The Commission was dissolved in 1936 with its management and assets transferred to the National Harbours Board. In 1983, the Government of Canada set up the Canada Ports Corporation (Canada Ports). Under it were created two categories of ports – local port corporations and divisional ports. Trois-Rivières received divisional port status. This meant it had to report to the national office regarding decisions on strategic and long-term development. In 1999, the federal government further reformed Canada's port system and added Trois-Rivières to the list of national ports. The *Canada Marine Act* created the Trois-Rivières Port Authority (TRPA). The mission of the Trois-Rivières Port Authority is to manage, develop, and promote the port for the benefit of its stakeholders and ensure the general security of the port while remaining sensitive to the need for a high degree of safety and environmental responsibility.⁶⁶

Independently funded, the Authority is operated as a wholly-owned enterprise and reinvests all its operating profits into port infrastructure. Under Section 25 of the *Canada Marine Act*, CPAs such as TRPA, are not eligible for federal funding, other than grants of general application, in the case of emergencies, capital costs for an infrastructure project, a contribution in respect to environmental sustainability or in respect to security.⁶⁷

The TRPA operates and manages Crown land but does not (and cannot) own it. It can and has acquired land in its own name.

Activities

Over 200 ships use the port each year to load and unload cargo. In 2013, the Port of Trois-Rivières handled 2.7 million metric tons of traffic. Foremost, solid bulk traffic (excluding grain) increased by 6%, from 1.3 million metric tons in 2012 to 1.4 million metric tons. In addition, general cargo traffic increased by 11%, from 151,000 to 167,000 metric tons. Liquid bulk traffic remained stable at 0.3 million metric tons. There was a decline in grain traffic handled in 2013, largely due to the end of the Canadian Wheat Board Monopoly. This situation is not unique to the Port of Trois-Rivières, as other grain terminals on the St. Lawrence River have also experienced declines in their activities. Nevertheless, for 2013, grain tonnage at the Port of Trois-Rivières still represented twice what it was before the completion of Phase I of On Course for 2020, the Port's development plan. These investments have thus strengthened the competitiveness of the port in this sector.

The port handles both Canadian and international ships on a year-round basis, with international traffic accounting for approximately 70% of its tonnage.⁶⁸

Since its “business turn”, net revenues have jumped from around \$200,000 to \$3.5 million. The TRPA has put in place its own business services, renegotiated contracts with users, purchased new property, and built strong relations with the provincial government, the city of Trois-Rivières and local and regional business partners.

⁶⁶ Port de Trois-Rivières, History, <http://www.porttr.com/en/about/history>.

⁶⁷ *Canada Marine Act*, p. 17, <http://laws-lois.justice.gc.ca/PDF/C-6.7.pdf>.

⁶⁸ Port Trois-Rivières. Annual Report 2013, p. 10.

Relationships for ports are often long-term and crucial to the industry. Tariffs with users have been renegotiated to ensure that funds are in place to replace old infrastructure and ensure growth and sustainability of the port. The inter-modal nature of port activities has made it so the TRPA has developed strong relationships with the city, for example taking over 1km of a street to ensure that mounting truck traffic would no longer drive through downtown Trois-Rivières.

It does so with a small team of approximately 11 staff.

Figure 23. TRPA Organizational Chart

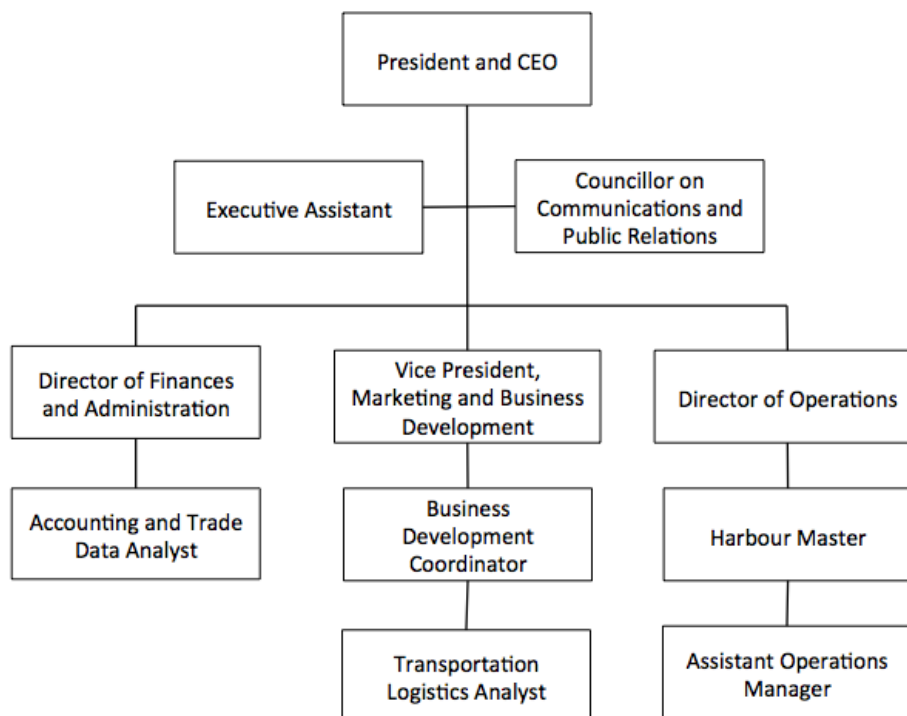


Figure 24. Port of Trois-Rivières Terminals⁶⁹



Economic Benefits Stemming from the 2011 Activities of the Port of Trois-Rivières⁷⁰

The most recent economic data for the Port of Trois-Rivières stems from 2011. The activities associated with all the traffic transiting through the Port of Trois-Rivières increased significantly between 2010 and 2011. The following increases were seen over a one year period:

- +12% in merchandise volumes handled at the port
- +13% in the number of ships entering and leaving the port
- +12% in the number freight cars entering and leaving the port
- +25% in the number of trucks entering and leaving the port

In 2011, spending related to all the traffic transiting the Port of Trois-Rivières yielded \$121.8M in direct and indirect value added for the Canadian economy (\$158.4M if you include induced effects). These economic benefits are spread throughout the transportation and handling logistics chain. At the same time these transportation and logistical activities supported 1,372 direct and indirect jobs in Canada (1,922 jobs when taking induced effects into account). The economic impacts for 2011 are almost 15% higher in value added compared to 2010 and 11% higher when considering jobs. This increase can be explained by the increase in traffic being stevedored and the more

⁶⁹ <http://www.porttr.com/en/terminals/interactive-map>

⁷⁰ <http://www.porttr.com/en/finances-statistiques/economic-impacts>

intense use of truck transport. The following table presents the main economic benefits. It should be noted that the results do not include the activities and jobs supported by the companies who are shipping or receiving goods transiting through the Port of Trois-Rivières.

Table 6: Summary of the principle economic benefits stemming from the 2011 activities of the Port of Trois-Rivières
(Québec and Canada)*

Table 6. Economic spin-off

	Direct Effects	Indirect Effects	Induced Effects	Total Effects
Value Added to Base Prices (M of \$)	89,5	32,3	36,6	158,4
Jobs Supported (Person-Years)	949	423	550	1 922
Canadian Gov't Revenues (M of \$)	4,8	3,2	3,7	11,7
Quebec Gov't Revenues (M of \$)	9,9	4,7	4,2	18,8

**For the maritime/port/ground components.*

Source: SECOR estimates drew from Statistics Canada and the Quebec Institute of Statistics' simulations.

Governance

Appointment Provisions⁷¹

The TRPA Board consists of seven directors. The directors of the Authority are appointed to hold office as follows:

- the Governor in Council appoints one individual nominated by the Minister;
- the cities of Trois-Rivières, Trois-Rivières-Ouest and Cap-de-la-Madeleine appoint one individual;
- the Province of Québec appoints one individual; and
- the Governor in Council appoints the four remaining individuals nominated by the Minister in consultation with port users selected by the Minister or with the classes of users.

The directors are appointed to hold office for any term of not more than three years that will ensure as far as possible the expiry in any one year of the terms of office of not more than one half of the directors, the terms being renewable twice only. A director shall serve no more than nine consecutive years on the board. If a successor has not been appointed at the expiry of a director's term, the director continues to hold office until their term is renewed or their successor is appointed.

⁷¹ Government of Canada, Governor in Council Appointments, Organizational Profile – Trois-Rivières Port Authority, <http://www.appointments-nominations.gc.ca/prflOrg.asp?OrgID=TRR&lang=eng>

The directors of a port authority shall have generally acknowledged and accepted stature within the transportation industry or the business community and relevant knowledge and extensive experience related to the management of a business, to the operation of a port or to maritime trade.

The Board shall elect a Chairperson from among its members for a term not exceeding two years, the term being renewable. Board members serve 3-year mandates, renewable twice.

Lessons Learned

The Trois-Rivières port was always well run and giving it more freedom as a Canada Port Authority allowed it to make greater investments without falling victim to bureaucratic red tape. It has been able to diversify its activity base and expand its tonnage per year significantly.

The TRPA completed an important strategic planning process in 2008 that led to the creation of *On Course for 2020: Developing Modern, Productive, Community-Integrated Infrastructures in Support of a Skilled Workforce*. Phase 1 of the plan was successfully completed in 2011 and included consolidating the Port estate and its secured perimeter, improving road access, increasing rail capacity, adding 26,000 square meters of outdoor storage space, building two warehouses (one for bulk and other for general cargo) and improving the City/Port interface. This required investments of \$25m which would not have been possible under the past arrangement. The investments increased the Port's capacity by 23%.⁷² Stakeholder consultation was key to the success of the plan. TRPA conducted consultations for one and a half year, which President Gaétan Boivin, believes helped TRPA reach its strategic objectives faster. *On Course for 2020* has become a development plan for the whole region, not just Trois-Rivières.

The TRPA President believes that the federal government nominations process makes it difficult to control the types of skills and expertise on the TRPA board. Having federal involve in the nominations process slows it down considerably.

5.2.2. PORTSTORONTO

PortsToronto, legally named Toronto Port Authority, is a government business enterprise that is overseen and held accountable to the Federal Government through Transport Canada. PortsToronto does not receive any government or public funding, and finances itself with revenue earned through the management of Billy Bishop Toronto City Airport, the Outer Harbour Marina and Marine Terminals 51 and 52 at the Port of Toronto. PortsToronto is also responsible for environment protection, monitoring and promoting boating safety and maintaining the efficiency of marine navigation in Toronto's port and harbour.⁷³

Established in 1999 under the *Canada Marine Act*, PortsToronto operates in accordance with the *Canada Marine Act* and its Letters Patent, in addition to a series of specific bylaws, policies and procedures. The Letters Patent outlines the activities that can be undertaken by PortsToronto.

⁷² Port de Trois-Rivières. On Course for 2020, <http://www.porttr.com/en/investment-projects/on-course-for-2020>

⁷³ Toronto Port Authority. Annual Report 2013, p. 5.

An agreement between Her Majesty in right of Canada as represented by the Minister of Transport, the City of Toronto and PortsToronto, known as the Tripartite Agreement⁷⁴, governs the management and operation of Billy Bishop Toronto City Airport. Amendments to the agreement cannot be made without the unanimous consent of all three signatories.

The Tripartite Agreement stipulates that PortsToronto must administer, control, manage, and operate the airport in an efficient and business-like manner so as to ensure the most effective operation thereof that is consistent with good management aimed at meeting the overall objective of cost recovery.

An important component of the agreement is to ensure that the airport adheres to stringent noise restrictions. These restrictions are some of the most restrictive of any airport in North America, and include a flight curfew that does not allow flights to operate between the hours of 11:00 pm to 6:45 am except for medical evacuations or in the event of other emergencies.

The province of Ontario owns the majority of the airport land with two small sections owned by the Government of Canada and a small section owned by the city of Toronto. The land is leased to PortsToronto for a nominal amount until 2033 under the 1983 Tripartite Agreement. Access to the airport is currently by ferry services operated by PortsToronto, although an underground tunnel is currently being built that is set to open later this year.

Activities

PortsToronto operates the Billy Bishop Toronto City Airport, which in 2012 had 2.3 million passengers⁷⁵, Billy Bishop Toronto City Water Aerodrome, Marine Terminals 51 and 52, the Passenger Cruise Ship Facility and the Outer Harbour Marina. PortsToronto provides transportation, distribution, storage and container services to business at the port.

Built in 1939 on land dredged from the harbour, the airport has three runways which can accommodate the smaller planes of regional scheduled airlines and general aviation aircraft. The 1983 agreement prohibits jet airplanes except in emergencies. In 2007, the number of landings and take-offs at the airport was 90,199. Because of its location near downtown and its tall buildings, industrial smokestacks and a wind turbine, air traffic into and out of the airport is controlled with approaches and departures routed over the lake. A seaplane base is located just east of the main apron. The airport is also used for medical flights.

The Billy Bishop Toronto City Airport was expected to welcome 2.4 million passengers in 2014. At the time, two air carriers – Porter Airlines and Air Canada, offered flights to 18 destinations. The airport is also the base for air ambulance service, which flew 4,100

⁷⁴ For details on the Tripartite Agreement, see: <http://www.porttoronto.com/TorontoPortAuthority/media/TPASiteAssets/PDFs/Tripartite-Agreement%281983-original-1985-and-2003-amendments%29.pdf>.

⁷⁵ Toronto Port Authority, Annual Report 2013, p. 17.

flights in 2013. It is also the home to two fixed-base operation facilities approximately 50 private planes and one flight school.⁷⁶

Figure 25. PortsToronto Jurisdiction within the Port and Harbour of Toronto⁷⁷



The Marine Terminals 51 and 52 within the Port of Toronto welcomed 33 international or ocean-going ships in 2013. Its traditional marine cargo business moved nearly 1.56 million tonnes in 2013. Bulk stone cargo shipments rose by 8 per cent in 2013. PortsToronto grants operator's permits to recreational boaters in the harbour of Toronto, oversees land development, engages in trade development for its terminals, and appoints the Harbour Master.

PortsToronto also provides regulatory controls and public works for marine and air navigation in the port and harbour of Toronto.

In 2013, the PortsToronto continued to work on diversifying its operations within the port with an ongoing focus on marketing its owned terminal operations with warehousing and project staging services to support downtown Toronto's growing construction activity. These efforts resulted in a significant rise in high-value construction staging cargo in 2013.

The 50-acre TPA terminal facility has more than 225,000 square feet of warehouse space and over 30 acres of paved marshalling area, ideal for short/long-term storage, warehousing and project staging. In addition to traditional marine cargo, the TPA's International Marine Passenger Terminal (IMPT) also saw continued cruise ship activity in 2013.⁷⁸

PortsToronto has a staff of approximately 110 full-time employees and 25 seasonal and part-time workers.

Governance

PortsToronto is guided by a nine-member Board of Directors composed of individuals appointed by all levels of government – Municipal, Provincial and Federal. The City of

⁷⁶ PortsToronto, Toronto Port Authority Annual Report 2013, p. 17.

⁷⁷ Image courtesy of PortsToronto 2013 Annual Report, p. 5.

⁷⁸ Ibid. p. 19.

Toronto and the Province of Ontario have a direct governance relationship with PortsToronto via their appointed representatives to the PortsToronto Board of Directors.

The Board of Directors is appointed as follows:

- One appointee is nominated by the Federal Minister of Transport.
- One individual is appointed by the City of Toronto.
- One individual is appointed by the Province of Ontario.

Six members are appointed by the Minister of Transport in consultation with Community Committees representing four identified groups – commercial, recreation, airport and port operations.

All individuals nominated by the Minister of Transport are appointed by the Governor in Council.

Finances

It is important to note that PortsToronto did not turn a profit until 2008. The TPA introduced a \$15 per flight Airport Improvement Fee in October 2006 on passengers departing on scheduled flights from the airport which, by 2008, generated enough revenues for the TPA to make a profit for the first time. The fee generated \$1.983 million in 2007 and \$3.877 million in 2008. In its 2008 financial report, the TPA's Statement of Revenue and Expenses shows an income from operations of \$2.251 million, with overall net income of \$863,000, compared to a loss on operations of \$1.877 million in 2007.⁷⁹ For the first six months of 2009, the TPA had a net income of \$1.154 million, 34% more than the net income reported for all of fiscal 2008. The TPA did post a profit in 2009, and announced it had also made a \$7.1 million profit for 2010, and nearly doubling that with a \$13.9 million profit in 2011.⁸⁰ It generated a net income of \$13.7 million dollars in 2013.⁸¹

In 2013 Billy Bishop Toronto City Airport generated income of \$39.5 million, which included Airport Improvement Fees of \$18 million. This is expected to remain stable in 2014, with passenger volumes forecast to increase slightly to 2.4 million.

Port and terminal operations also contributed to PortsToronto's profitability in 2013. The port reported operating income from all sources of \$1.1 million, representing steady performance compared to 2012, when operating income was \$1.4 million.

The Outer Harbour Marina's operating income increased in 2013 to \$1.4 million, up slightly from \$1.3 million the year prior. This growth came during a year when PortsToronto made considerable improvements to better serve the boaters at the marina and build on its program of environmental best practices which has earned the Outer

⁷⁹ Deloitte & Touche LLP. Financial Reports for 2008, http://www.portstoronto.com/PortAuthority/REPORTS/Finance_2008_Eng.pdf

⁸⁰ PortsToronto. <http://en.wikipedia.org/wiki/PortsToronto>.

⁸¹ PortsToronto. Toronto Port Authority Annual Report 2013, p. 9.

Harbour Marina a “5 Green Anchor Gold” rating from Boating Ontario as part of its Clean Marine program.⁸²

This growth and profitability enabled PortsToronto to continue making important investments in Toronto's waterfront infrastructure, the environment and community organizations. In fact, since 2009, PortsToronto has invested more than \$5.6 million in community and environmental initiatives.⁸³

Financial Reports⁸⁴

	Year ended December 31				
	2013	2012	2011	2010	2009
REVENUE					
Port operations	\$5,740	\$6,145	\$5,398	\$4,402	\$5,156
Outer Harbour Marina	3,255	3,025	2,789	2,568	2,459
Billy Bishop Toronto City Airport	21,534	20,853	17,721	13,313	8,161
Property rental and other	1,332	1,206	1,398	1,383	1,237
Investment income	432	482	269	358	921
	\$32,293	\$31,711	\$27,575	\$22,024	\$17,934
Airport Improvement Fees, net - for airport capital expenditures	18,000	17,867	14,645	9,962	5,241
	\$50,293	\$49,578	\$42,220	\$31,986	\$23,175
EXPENSES					
Port operations	4,671	4,773	4,229	3,938	4,260
Outer Harbour Marina	1,905	1,748	1,598	1,416	1,458
Billy Bishop Toronto City Airport	18,466	14,669	13,178	11,577	8,315
Property rental and other	939	1,053	1,339	1,050	1,035
Corporate services	5,685	5,237	4,529	4,574	3,825
Charge on gross revenue	2,411	2,368	1,930	1,318	630
	\$34,077	\$29,848	\$26,803	\$23,873	\$19,523
NET INCOME FROM OPERATIONS BEFORE THE FOLLOWING					
	16,216	19,730	15,417	8,113	3,652
Adjustment to City of Toronto HUF*	-	-	-	-	(2,958)
Payments in respect of land disposition	-	1,812	1,880	2,087	2,155
Lands transferred (macro settlement)	-	-	-	(780)	-
Payments in lieu of taxes	(2,866)	(2,137)	(2,210)	(1,828)	(1,503)
Gain (loss) on interest rate swap	315	207	(816)	(306)	-
(Loss) due to impairment of capital assets	-	-	(350)	-	-
NET INCOME	\$13,665	\$19,612	\$13,921	\$7,286	\$1,346

* Harbour User Fees

Lessons Learned

PortsToronto has a highly political board. In 2008, PortsToronto's Letters Patent were modified to raise the number of board members from seven to nine. The two additional board members are federal appointments. The new members, both having ties to the Conservative Party of Canada, were criticized on their merits and the appearance of patronage.

⁸² Ibid. p. 10.

⁸³ PortsToronto. Toronto Port Authority Annual Report 2013, p. 9.

⁸⁴ PortsToronto. Toronto Port Authority Annual Report 2013, p. 40.

5.2.3. BC FERRIES/BC FERRY AUTHORITY

BC Ferries provides year-round vehicle and passenger service on 25 routes to 47 terminals and has a fleet of 35 vessels. It is viewed as an essential transportation link connecting coastal communities and facilitating the movement of people, goods and services.

In 2003, BC Ferries was transformed from a Crown Corporation to a quasi-independent, commercial organization. An independent Board of Directors appointed by the B.C. Ferry Authority governs BC Ferries. B.C. Ferry Authority (Authority) is an independent, no-share capital corporation created under the *Coastal Ferry Act* (British Columbia) that holds the single issued voting share of British Columbia Ferry Services Inc. (BC Ferries), a company incorporated in British Columbia, which is subject to the *Business Corporations Act* (British Columbia).⁸⁵

BC Ferries operates ferries under the terms set out in the 2003 Coastal Ferry Services Contract – a 60-year service contract with the Province of British Columbia. With this contract, the government pays BC Ferries a defined service fee of approximately \$125 million annually in return for providing a defined number of sailings during specific hours. The service levels and service fees paid under the contract are reviewed every four years.

The provincial government is the holder of all of the preferred shares of BC Ferries. The Authority is responsible for appointing the Board of Directors of BC Ferries and for establishing compensation plans for the Directors and certain Executives of BC Ferries. Both the Authority and BC Ferries operate independently of the provincial government.

Activities

Figure 26. BC Ferries Routes¹



BC Ferries provides a wide range of ferry services for its customers. During the year ended March 31, 2014, it provided over 183,000 sailings, carrying 19.7 million passengers and 7.6 million vehicles. It has experienced a 1.3% decline in vehicle traffic and a 1.1% decline in passenger traffic in fiscal 2014 compared to the prior year.

Since the privatization, it has diversified its offerings such as bringing restaurants and gift shops on ferries serving some of its main routes. Earnings from BC Ferries' food and retail services continue to rise — they are predicted to grow to \$49 million in 2016 — even while traffic declined following the economic crisis in 2008.⁸⁶

Another source of revenue for BC Ferries is the drop-trailer service. A commercial customer drops a trailer at the terminal, BC Ferries loads it on the vessel and takes it to the other terminal for pickup. That spares the trucking company the expense of

⁸⁵ BC Ferries, About BC Ferries, Our Company, Corporate Profile, http://www.bcferrries.com/about/More_Information.html

⁸⁶ Bly, David. "BC Ferries boss defends commercial ventures, executive pay", Vancouver Sun, April 5, 2015, <http://www.vancouversun.com/Ferries+boss+defends+commercial+ventures+executive/10947426/story.html>

transporting the tractor and driver, and allows Ferries to get more trailers aboard. The service was started in 2009 and last year made a profit of \$8 million. That is expected to increase to \$8.7 million next year.

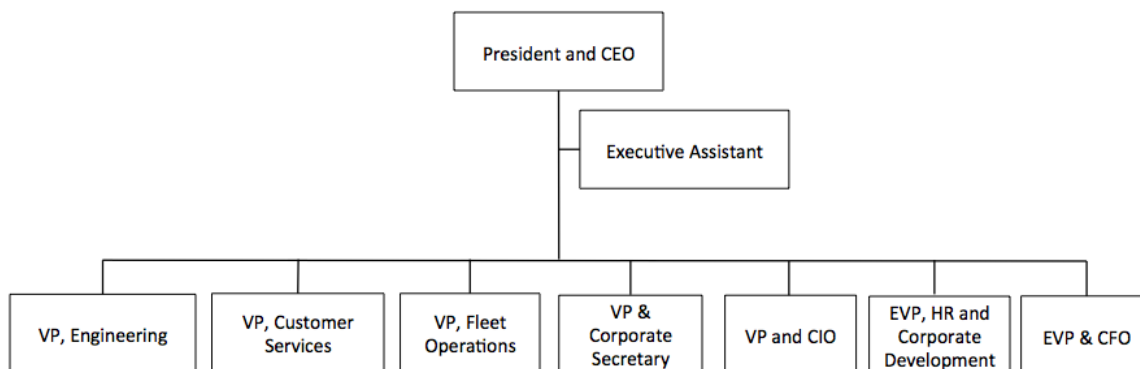
And BC Ferries Vacations, which offers more than 100 travel packages to 45 destinations, contributed a profit of \$1 million to the corporation in 2014. Money spent on the advertising wasn't wasted.

BC Ferries' two main routes account for 62% of its total revenues (and are used to support its 23 other routes many of which serve small coastal islands and communities. According to Bird, any attempt to reorganize the firm or contract out specific routes would eliminate the capacity of BC Ferries to cross subsidize its low volume routes.

Privatizing or contracting out each route, for example, would require multiple high-profile subsidies to service providers and would most likely mean the loss of its revenue positive services since they would be the most attractive routes to a private operator.⁸⁷

In 2009, the company workforce consisted of 2,800 full-time workers and 1,700 casual, on-call employees.⁸⁸

Figure 27. BC Ferries Senior Management Organizational Structure



Governance

BC Ferries is controlled by the BC Ferry Authority through its ownership of the single common voting share of BC Ferries. The Authority appoints the BC Ferries Board of Directors. This structure was put in place to ensure that the operations of BC Ferries are independent from the provincial government. BC Ferries is regulated by the Ferries Commission to ensure that rates are within the fare price caps set by the Commission and to monitor whether service levels comply with the service contract between the province and BC Ferries.

⁸⁷ Malcolm G. Bird, "Canadian state-owned enterprises: a framework for analyzing the evolving crowns", *Policy Studies*, 2015, p.5.

⁸⁸ Office of the Comptroller General, Report on Transportation Governance Models, 2009, p. 13.

The BC Ferry Authority's board composition is set out the Coastal Ferries Act. Four directors are appointed by the board from nominees of four appointment areas made up of coastal regional districts, and one director is appointed from the nominees of the BC Ferry & Marine Workers' Union, which represents the employees of BCFS. The board also includes two directors appointed by the Province of British Columbia and two additional directors appointed by the board from members of the community-at-large.

The purpose of the Authority is to govern BC Ferries and to appoint its Board of Directors. While the current structure has been put in place to ensure the operations of BC Ferries are independent from the provincial government, the governance of the Authority includes local politicians and provincial politicians and their have been some instance of interference with management decisions.

Lessons Learned

The new operating and governance model was put in place to remove political involvement from ferry operations, apply a commercial approach to the business with a focus on efficiency, and leverage private sector financing for fleet renewal. This has been achieved, to some degree.

BC Ferries has developed formal mechanisms for separating routine business operations from problematic influence from their public owners. Government, as is their right as sole shareholder, is free to set the long-term policy and commercial goals, but it should not unduly interfere in their day-to-day business operations. Such interference not only makes operating any modern enterprise difficult, as it is impossible to implement viable business plans, but it also makes recruiting capable employees hard particularly when other workers owe their jobs to their personal connections with the government.

Eliminating this type of interference at a Crown and formalizing the relations between the sole shareholder and a state agency is welcomed by most governments since they want to minimize the potential for politically damaging attention associated with scandals or other types of poor behaviour emanating from Crowns under their control. However, it appears that the BC Ferry Authority may have used its political sway to influence management decisions.

In the case of BC Ferries, there has been some criticism of the privatization with some saying it has yielded bloated management, lack of transparency, increasingly inefficient service and rapidly rising costs.⁸⁹

Overall profitability has gone up over the past years, to the detriment of affordability. A 2012 Review of the Coastal Ferry Act highlights that a combination of factors, including a downturn in the economy, a decline in ridership, reduced tourism and particularly the application of the greater reliance on the user pay principle, ferry fares have risen sharply across the system, especially so in the less populated parts of the BC coast.⁹⁰

⁸⁹ Hume, Stephen. "BC Ferries a bloated, inefficient and recessionary drag on the province", The Vancouver Sun, February 18, 2014, <http://www.vancouversun.com/business/Stephen+Hume+Ferries+bloated+inefficient+recessionary+drag+pr+ovince/9520800/story.html#ixzz3Y9ZsLR1d>

⁹⁰ BC Ferry Authority. BC Ferry Authority 2013-2014 Annual Report, p. 5.

In the last couple of years, ferry fares have increased leaving some to wonder if this is the best model to serve British Columbians.

5.2.4. VIARAIL

VIA Rail Canada operates the national passenger rail service on behalf of the Government of Canada. As an independent Crown Corporation established in 1977, the corporation provides travellers with safe, efficient and cost-effective passenger transportation in the country's two official languages.

VIA Rail operates almost 420 trains weekly on 12,500 kilometres of track, and serves 450 communities across the country, from coast to coast and north to Hudson Bay. VIA carried nearly four million passengers in 2012.

VIA's fleet includes 396 passenger cars and 78 active locomotives. In addition to 159 railway stations, VIA operates four modern maintenance facilities. While VIA owns 223 kilometres of track, most of the infrastructure used by the passenger service is owned and managed by the freight railways, including ten different national and short-line operators.⁹¹

Activities

VIA provides passenger services mandated by the Government of Canada. These include rapid intercity services, cross-Canada services, and services to remote communities, where there are sometimes very few means of transportation.

In Western Canada, VIA provides year-round, all-weather services, including the legendary Canadian train operating between Toronto and Vancouver two times per week during off-peak season (November 1st until April 30th) and three times per week during peak season (May 1st until October 31st). VIA also operates regional services in the West, between Jasper, Alberta and Prince Rupert, British Columbia; between Winnipeg and Churchill, Manitoba.

⁹¹ Via Rail, About VIA Rail, <http://www.viarail.ca/en/about-via-rail>.

Figure 28. Via Rail Network⁹²



In the Ontario - Québec Corridor, VIA provides intercity passengers with convenient and affordable service, often downtown-to-downtown between Canada's largest business centres. More than 370 Corridor trains run per week, carrying 80 percent of VIA's total ridership. VIA also operates trains to remote communities in northern Quebec and Ontario, on routes designated by the Government to meet regional transportation needs. In Eastern Canada VIA provides train service three times per week between Montreal and Gaspé, and between Montreal and Halifax on board the Ocean. Its intercity routes in central Canada account for over 75% of its revenues and this income is used to support passenger rail services throughout the rest of the country. More specifically, the revenues are used to fund six remote passenger rail lines where year-round ground transportation is not feasible and where the federal government is obligated to provide dependable surface transportation.⁹³

The corporation operates over 500 trains weekly on 12,500 kilometres of track, connecting over 450 Canadian communities. With approximately 2550 active employees, VIA Rail carried 3.9 million passengers in 2013.⁹⁴ The Corporation has a matrix-based organizational structure that uses an inter-functional approach where each person in charge of a sub-sector takes responsibility for all aspects of planning, operations, and control. This structure promotes communication among the various departments, the sectors, and the sub-sectors of the organization.

Maintenance of the rolling stock is conducted in maintenance centres in Montreal, Toronto, Vancouver, and Winnipeg. The Corporation also offers maintenance of cars and locomotives as a service to other transportation companies. On the network as a whole, the Corporation has 418 available passenger facilities, 86 of which are stations.⁹⁵

Of note, freight railway carriers own most of the infrastructure used by the Corporation's trains and are therefore responsible for track management. The use of the infrastructure

⁹² Image from Via Rail website : <http://www.viarail.ca/en/explore-our-destinations/trains>

⁹³ Malcolm G. Bird, Canadian state-owned enterprises : a framework for analyzing the evolving Crowns, Policy Studies, 2015 p. 7.

⁹⁴ VIA Rail, Annual Report 2013, p. 2. http://www.viarail.ca/sites/all/files/media/pdfs/About_VIA/our-company/annual-reports/2013/VIA_Rapport_annuel_EN_FINAL.pdf

⁹⁵ Auditor General of Canada. Special Examination Report of VIA Rail Inc. – 2008, p. 10.

is set out in service agreements signed with the carriers. Provision is made in these agreements for a specific use of the infrastructure based on pre-determined terms, conditions, and rates. If the Corporation wants to increase the frequency of its trains, it must re-negotiate the terms and conditions of the agreements with the owners of the tracks.⁹⁶

According to a report by Transport Action Ontario, the agreement is not advantageous to VIA Rail and has left VIA Rail paying excessively for what some see as poor service and track access from CN.⁹⁷

Governance⁹⁸

VIA Rail was incorporated in 1977 under the *Canada Business Corporations Act* as a subsidiary of the Canadian National Railway Company (CN). In 1978, VIA Rail became a Crown Corporation separate from CN. To date the Corporation is not governed by any framework legislation. The Corporation operates the passenger rail service on behalf of the Government of Canada through an annually approved corporate plan.

The Corporation accounts for its activities to Parliament through the Minister of Transport, Infrastructure and Communities. VIA Rail is not an agent of the Crown. The Corporation is subject to corporate income tax.

The Board of Directors consists of the Chairperson, the President and Chief Executive Officer and nine other directors appointed by the Government of Canada.

The Chairperson and the President are appointed by the Governor in Council (GIC) to hold office during pleasure for such term as the GIC may determine.

Each director shall be appointed by the Minister with the approval of the GIC to hold office during pleasure for such term not exceeding four years as will ensure, as far as possible, the expiration of not more than one half of the directors' terms of office in any one year. A director is eligible for reappointment.

The Board is responsible for overseeing the strategic direction and management of the Corporation, and reports on VIA Rail's operations to Parliament through the Minister of Transport.

Lessons Learned

The future of VIA Rail is in the hands of the federal government, not its management team. The Corporation is dependant on federal government policy supporting it and funding it appropriately.

In spite of a major change in governance in 1977, with the creation of a crown corporation operating commercially, VIA Rail and the rail passenger program of Transport Canada do not demonstrate significant benefits from the change in governance. Operating commercially would normally bring operating efficiencies and a reduction in costs and possibly operating profits. In the case of VIA Rail however, the

⁹⁶ Ibid. p. 11.

⁹⁷ Greg Gormick. *Out of Steam – The Urgent Need to Modernize VIA Rail Canada*, Transport Action Ontario, 2014, p. 17.

⁹⁸ Government of Canada, Governor in Council Appointments, Organization Profile – VIA Rail Canada Inc., <http://www.appointments-nominations.gc.ca/prflOrg.asp?OrgID=VIA&type-tyt=1&lang=eng>

company did not make much efficiency gains in its personnel costs because it maintained its agreements and acquired rights with its staff. Also, VIA negotiated its access to rail tracks with the two major railways without the benefit of a legislated priority for passengers over freight on rails which made it difficult for VIA to make efficiency gains on its cost of access to rails.

The Crown Corporation model allows VIA Rail to use the funds from its most popular routes to offset the costs of its more remote routes. However, it remains dependant on federal funding – which has fallen from \$530 million in 2010 to \$398 million in 2013. This has required it to undertake some service cuts. What's more, VIA has been underperforming and its costs and liabilities are increasing.

Thus, governance isn't everything if other conditions are either not favourable or if the full potential of the governance model cannot be exercised given the circumstances. In this case, the strength of the two major railway companies CN Rail and CP Rail was such that without a legislated priority for passenger rail over freight, Via Rail could not succeed in its attempts to tilt the balance or "imbalance".

5.2.5. FUEL SERVICES (FORMERLY NWT PUBLIC WORKS PETROLEUM PRODUCTS DIVISION)

The Petroleum Products Program currently provides Fuel Services to the public in 16 communities where there is not a private sector provider. In addition, it provides services to 20 Northwest Territories Power Corporation facility locations.

Small businesses in each community are contracted by Fuel Services to provide home heating fuel delivery and gasoline and diesel fuel dispensing services. The products include home heating fuel, vehicle fuels (gasoline, diesel), aviation fuels, power generating fuel, and naphtha.⁹⁹

Fuel Services arranges the supply and delivery of fuel to communities by contracted suppliers and carriers, using a variety of transportation systems: territorial highways, winter roads, and in the summer by ocean tanker, tug and barge. GNWT bulk fuel storage facilities have the capacity to ensure that sufficient fuel is always on hand for local distribution by fuel service contractors.

Fuel Services activities are financed through the Petroleum Products Revolving Fund.

The revolving fund was established in 1973 for the distribution of petroleum products in NWT. The Fund operates under the authority of the *Revolving Funds Act*¹⁰⁰ and the *Northwest Territories Financial Administration Act*. The Petroleum Products Division of the Department of Public Works and Services of the Government of the Northwest Territories is responsible for the administration of the fund.

Under the Act, the Fund receives working capital advances from the Consolidated Revenue Fund (CRF) to finance inventory, accounts receivable and operating expenses. The Fund's purchases of petroleum products and operating expenses are paid from the

⁹⁹ Government of the Northwest Territories. Community Fuel Services, <http://services.exec.gov.nt.ca/service/376>

¹⁰⁰ See <https://www.canlii.org/en/nt/laws/stat/rsnwt-1988-c-r-7/latest/rsnwt-1988-c-r-7.html?autocompleteStr=Revolving%20Fund%20Act&autocompletePos=1>

CRF and funds received by the Fund are deposited in the CRF. The authorized limit of the Fund, being the maximum amount by which the assets may exceed the liabilities is \$55 million.

The prices for the Fund's petroleum products are approved by the Government and it is the expectation of the Government that the Fund's cost of goods sold and operating expenses will be recovered through the price structure to achieve a break-even operation. It is also monitored so that it remains within the profit and loss restrictions of the Stabilization Fund, as set out in the *Financial Administration Act*. The Stabilization Fund is meant to stabilize the prices of petroleum products that are purchased, sold and distributed in the Northwest Territories.

Commercial suppliers contracted by Fuel Services deliver petroleum products to communities in the Northwest Territories not served by all season roads. Petrol is delivered to communities once a year, over a tight window. The price that it is purchased at is the price that it is sold for. Customers also pay the cost of transporting the fuel, the sales commission that pays the local suppliers in the communities, a levy for the repair and maintenance of the GNWT's trucks and facilities, administrative and insurance fees paid for by the department, and, of course, taxes. They currently have a staff complement of 13 individuals under Fuel Services including operations in Fort Simpson (6 staff) and Inuvik (4 staff).

As of April 1st, 2015, functions within government that deal with energy policy, planning, research, programs and projects were consolidated as an activity of Public Works and Services (PWS).¹⁰¹

¹⁰¹ Government of the Northwest Territories. Consolidation of GNWT Energy Functions Backgrounder, <http://news.exec.gov.nt.ca/wp-content/uploads/Backgrounder-Energy-Consolidation.pdf>

Financial Information¹⁰²

Figure 29. Fuel Services – Statement of Operations 2012-2013

Statement of Operations and Changes in Net Assets		
For the year ended March 31,	2013	2012
Revenue		
Sales of petroleum products (note 10)	\$ 41,267,928	\$ 32,624,492
Cost of goods sold	35,002,953	26,770,330
Gross margin	6,264,975	5,854,162
Expenditures		
Bad debts (recovered)	55,831	(8,139)
Commissions	2,369,848	2,209,248
Contracts and purchased services	945,272	740,907
Operating and maintenance costs	466,330	726,877
Miscellaneous	29,405	7,554
Salaries, wages and employee benefits	2,008,192	1,935,904
Travel	330,393	315,015
Utilities	305,113	301,545
	6,510,384	6,228,911
Deficiency of revenue over expenditures before other items	(245,409)	(374,749)
Other Income (expenses)		
Other revenue	59,108	94,020
Grant-in-kind, Government assets provided at no cost (note 5)	2,541,829	2,450,423
Financing charges (note 5)	(594,754)	(497,423)
Tangible capital assets - rent expenses (note 5)	(1,947,075)	(1,953,000)
	59,108	94,020
Deficiency of revenue over expenditures	(186,301)	(280,729)
Stabilization fund, beginning of year	368,282	649,011
Stabilization fund, end of year	\$ 181,981	\$ 368,282

¹⁰² Finance, Government of the Northwest Territories. YE Item #64 Revolving Fund Audited Financial Statements, 2013
http://www.fin.gov.nt.ca/sites/default/files/documents/8s1501_ppd_2013_audited_finstmts.pdf

Figure 30. Fuel Services – Statement of Financial Position (2012-2013)

Statement of Financial Position		
March 31,	2013	2012
Assets		
Current		
Accounts receivable (note 6)	\$ 8,634,200	\$ 11,421,189
Inventory (note 7)	28,517,741	26,850,895
Prepaid expenses	109,581	-
	\$ 37,261,522	\$ 38,272,084
Liabilities		
Current		
Accounts payable and accrued liabilities (note 8)	\$ 5,726,945	\$ 5,649,608
Employee benefits payable	211,567	154,044
Due to the Government of the Northwest Territories - revolving fund (note 9)	31,141,029	32,100,150
	37,079,541	37,903,802
Fund balances		
Stabilization fund	181,981	368,282
	\$ 37,261,522	\$ 38,272,084

Lessons Learned

At the end of each fiscal year the inventory and accounts receivable of the fund are valued. If the value exceeds the total of expenditures and liabilities the excess will be transferred from the revolving fund and recorded as revenue in the Consolidated Revenue Fund. If the value is less than the total of expenditures and liabilities the deficiency will be charged to an appropriation.

The key lesson as it applies to YZF is that the government has made a commitment that one of its agencies will operate on the principle of cost recovery and that the reporting will be transparent in terms of revenues and expenditures. It should be noted that the any revenues above expenditures are returned to CRF and not reinvested in Fuel Services.

6. GOVERNANCE OPTIONS IDENTIFICATION AND ANALYSIS

6.1. INTRODUCTION

The objectives of airport management under any governance model should be:

- a) To manage, operate and develop the airport in a safe, secure, efficient, cost effective and financially viable manner with reasonable airport user charges and equitable access to all air carriers.
- b) To undertake and promote the development of the airport lands for uses compatible with air transportation activities.
- c) To expand transportation facilities and generate economic activity in ways which are compatible with air transportation activities.

Potential models on the governance continuum go from a government department (status quo) to privatization, as illustrated in Figure 31 below.

Figure 31. YZF Governance Options



6.2. GOVERNANCE OPTIONS

6.2.1. GOVERNMENT DEPARTMENT (STATUS QUO)

This model is characterized by the fact that the organization, which is typically created by statute, is under the direction and control of a minister of the government and by delegation, his deputy and other delegates. This is a classic bureaucratic hierarchical model.

The department does not have a separate legal personality and operates within the government frameworks. It is subject to government financial rules, and planning and reporting requirements, including lapsing of unexpended funds at the end of a fiscal year. Under this model, the Yellowknife Airport has to compete with every government department program for funding, including for capital funding, to ensure its development.

Revenue from the airport is paid directly in the Consolidated Revenue Fund (CRF) without the possibility of retaining earnings for airport operations or development. Thus there is no incentive for revenue generation where such initiatives will increase departmental costs without a concomitant increase in revenue which remains in the department. Under this model, the CRF and not the airport budget benefits from an incremental revenue stream(s) and thus does not create a condition for appropriate resource investment.

There are also elements of cross-subsidization of the airport operation that are “hidden” in the departmental or government-wide budgeting. Some costs of running the airport (e.g., planning; grants in lieu of taxes; liability insurance) are not accounted in the airport budget because they are hidden in the meanders of the Department of Transport or Territorial Government at large. This prevents getting a clear picture of the real total costs of operating the airport. As well, cross-subsidization by the airport of government activities by other cost centres or departments also occur (e.g., Tourism; Air Show; Forest Fire Fighting) and are not accounted for in the Yellowknife Airport budget.

Under this model, airport procurement is subject to GNWT procurement processes. For legitimate reasons, government procurement is complex as compared to the private sector procurement and it is likely an impediment to optimizing operational efficiency in a commercial environment such as that of an airport operation.

Under this model, airport employees are GNWT employees. Similarly, the government labour relations regime is complex in order to ensure impartiality and fairness in hiring and promotion. As well, tenure, pension and dispute settlement are subject to different regimes in government and the private sector. These various government requirements bring rigidity in the operation of an airport, which may compromise the ability to optimise the efficiency of its operation.

Prior to 1992 all Canadian airports were managed under this model by Transport Canada. The departmental model did not provide the requisite financial incentives and opportunities for each principal airport to be operated as a financially self-sustaining entity and while these exigencies are the norm in government, it was the view at that time that they were far from optimal for the management of an airport operation as a commercial-type activity.

6.2.2. SPECIAL OPERATING ENTITY

Special Operating Entities (SOEs) are operational units within a department that have some management flexibility, independence and separate accountability. They function within the basic government department division framework as described above, albeit altered by a framework agreement approved by the Deputy Minister, the Minister and the Financial Management Board. SOEs existence is internal to government and they do not have a separate legal personality.

SOEs have a clear mandate and the services they provide are readily identifiable and operational in nature. They follow the departmental legislative framework and authorities, although they may be granted special flexibility for financial, human resources or other specified objectives potentially including separate employer status. They typically have access to a revolving fund, which is a continuing or non-lapsing authorization by the Legislature to make payments out of the Consolidated Revenue Fund for working capital, capital acquisitions and temporary financing of accumulated operating deficits. Under s. 59 of the *NWT Financial Administration Act*, the establishment of a revolving fund requires an Act of the Legislature.

Operating Yellowknife Airport as a SOE could alleviate several of the shortcomings identified under the government department division model above. For example, the SOE could be granted a revolving fund accompanied with authority to retain earnings so that operational surpluses could be used as investments to improve operations (e.g.,

common use airline or baggage sortation equipment) and special levies such as airport improvement fees or special landing charges for certain capital improvements (e.g. terminal building improvements or extension of runways or building a new runway). The “willingness to pay” or social acceptability of these new charges would be higher because the payers would know that the additional funding would be dedicated to certain defined purposes relating to the operation of the airport rather than going to the CRF potentially for any government purpose. It would also provide an incentive to Yellowknife Airport SOE to earn additional revenues from the airport operation knowing that additional funds would stay within the ambit of the SOE to be used for airport improvement and development. For optimum stakeholder acceptance, defined accountabilities and financial transparency would be key.

The risk with this approach is that the model remains totally within the direction and control of the Minister, the Deputy Minister, the Board of Financial Management and the Territorial Government. The “rules of the game” establishing the SOE could be altered at the whim of the government, by changing the terms of the decision creating the SOE. It does not guarantee the continued existence of the SOE, except for the creation of a revolving fund which requires an Act of the Legislature to create and to wind-up.

6.2.3. GOVERNMENT CORPORATION

Government corporations are organizations that operate following a private-sector model but usually with mixture of commercial and public policy objectives. Parent government corporations are those directly owned by the government and are created by legislation, by letters patent, or by articles of incorporation, pursuant to statutory authority. Subsidiaries are entities owned, in whole or in part, by one or more parent government corporation and their creation also requires statutory authority. Government corporations are typically share-capital for-profit corporations.

Creating a Yellowknife Airport Corporation would require legislation either to authorize the incorporation of a business corporation under the *Business Corporations Act* or to enact a *Yellowknife Airport Corporation Act*. Either legislative vehicle could be used to obtain the same outcome – a ‘Crown’ owned corporation.

This model is characterized by the fact that the organization is under the direction of a board of directors appointed by the shareholder, *i.e.*, the government through the appropriate minister. The government corporation has a separate legal personality and insofar as it is not dependent upon appropriations, operates outside the government financial framework.

A government corporation must submit annually a corporate plan (business, activities and investments), operating and capital budgets to the appropriate minister for approval and must operate in accordance with the approved corporate plan and budgets. It cannot borrow money without the approval of the appropriate minister, the minister of Finance and the Financial Management Board. Government corporations must report annually to the Legislature through the appropriate minister.

Under this model, one would assume that all cross-subsidization would end and that the entire costs of running the Yellowknife Airport would be borne by the government corporation and also that all revenues from the airport operation would go the government corporation, in its own bank accounts (rather than the CRF).

Under this model, retained and increased revenues could be used for the improvement and development of the airport. Levies could improve the financial position of the airport and ensure its capacity to renew and increase its capital assets, unless it was directed by the government to pay out dividends from its operating surpluses.

This model has the potential to foster the operation of the airport on a commercial basis. It provides the airport entity with a separate legal personality, a separate employer status not subject to government employment and labour relations' regime but rather to regimes applicable to other private-sector employers, retaining its revenues and running its operation on a commercial basis. The same is true of procurement: government procurement rules would not apply to the government corporation.

Under this model, government retains several elements of control: appointment of all directors, annual approval of operating plan and operating and capital budgets, which bind the corporation, and finally the ability to issue directives that must be obeyed by the corporation. This model could include a management/operations contract with the Corporate Entity being the link to the territory acting as a contract manager at arms length (potentially creating stronger business discipline and further obstacles for political interference).

Depending on how this regime is administered, it could prove a successful model, while remaining relatively close to the government on the governance continuum.

6.2.4. AIRPORT AUTHORITY

Airport Authorities are typically shared governance not-for-profit corporations. Shared governance corporations include corporate entities without share capital for which the government has a right, pursuant to statute, articles of incorporation, letters patent, by-law or any contractual agreement (including funding or contribution agreements) to appoint or nominate one or more voting members to the governing body and where other members are appointed by other entities.

This model is characterized by the fact that the organization is under the direction of a board of directors appointed by a variety of stakeholders, *i.e.*, government, municipality, air carriers, community interests, etc. and where the government appointees are typically a minority. As a corporation, the Airport Authority has a separate legal personality and operates outside the government financial framework. In addition to the advantages found in the Crown corporation model, the Airport Authority may borrow money on the credit of the corporation without any further approval (unless restricted by its constitutive instrument such as enactment, agreement, funding arrangements, etc.). It is unlikely to be able to pledge assets as collateral.

Shared governance organizations imply a loss of control by government on the organization because several stakeholder interests are involved in the appointment of the governing body of the authority. This brings buy-in by those stakeholder interests and a sense of ownership of the broader community in the airport authority. It is therefore important to set the terms of reference or mandate of the organization clearly at the outset because there is no on-going control per se by the government under this model.

While typically created as not-for-profit corporations, airport authorities operate airports on a commercial basis in a business-like fashion. They are “not-for-profit” corporations only in the sense that their purpose is not to make a profit to pay dividends back to shareholders but rather to ensure the sustainability of the airport, its maintenance and development. All profits (or surpluses) are reinvested in the development of the airport assets, facilities and services. They are “not-for-profit” but are certainly commercial business operations.

While shared governance entities are not part of the spectrum of entities that have a formal or mandatory reporting relationship to the government or the legislature, constitutive instruments will normally include reporting requirements if only for transparency purposes, and might include, but not limited to, annual reports, performance reports, financial reports and Master and/or Land Use Plans for approval by the owner.

6.2.5. P3 CONCESSION

P3 is not in and of itself a governance model but rather a procurement method that in fact becomes a governance model where the P3 concession involves the operation of an infrastructure for period of time. There are many definitions of what constitutes a P3 and nearly as many alternative terms used to refer to the P3 concept but for our purposes, P3 is defined as a long-term contractual relationship between a public authority and the private sector that involves:

- The provision of capital assets and associated services to meet a defined output specification (*i.e.*, define what is required rather than how it is to be done);
- The integration of multiple project phases (*e.g.*, design, build, finance, operate and maintain);
- A transfer of risk to the private sector anchored with private sector capital at risk; and
- A performance-based payment mechanism.

It is worth noting that under federal government P3 policy, all infrastructure projects creating an asset with a lifespan of at least 20 years, and having capital costs of \$100 million or more, will be subjected to a P3 screen to determine whether the P3 approach may be a suitable delivery option. If the assessment concludes that there is P3 potential, the procuring department will be required to develop a P3 proposal among possible procurement options.

There are a number of generic P3 options, including but not limited to:

Design-Build-Finance (DBF)

In this model, the private partner has responsibility for designing and building the asset to comply with the specifications of the public sector entity. The private sector is also responsible for arranging its own financing during the construction period as it will not normally receive any payments from the public sector entity until the asset is complete

and delivered for operation. The duration of these agreements normally span the construction period of the project and a warranty period following delivery.

The main benefits of this model are cost and time certainty for the public sector entity as well as the transfer of design and construction risks. The limitations of this model is that it can provide the private sector with an incentive to limit its costs in the design and construction phases on the basis that the public sector entity will be responsible for the asset over the longer term.

Design-Build-Finance-Maintain (DBFM)

The DBFM model builds on the DBF by making the private sector also responsible for maintaining the asset in accordance with the performance specifications over the long term, normally 20 to 35 years. Maintenance can include daily facilities maintenance, annual maintenance, and life-cycle maintenance, the latter of which includes major upgrades or replacements of major components.

Unlike the DBF, the disciplines brought by private sector finance and performance-based payments are brought to bear over the entire life of the asset, which has the effect of providing the public sector entity with a long-term warranty on the performance of the asset. The benefits of cost and time certainty continue to apply during construction as well as through major life-cycle expenditures, which are now to be undertaken by the private partner.

Within the DBFM model, there is room for variation with respect to the amount of maintenance responsibility/risk that is transferred to the private partner and with respect to the duration of private financing. Obviously, these variants present different risk (and cost) profiles for the public sector entity.

The long-term nature of the DBFM requires that the public sector entity also specify the desired condition of the asset at the end of the project agreement. The project agreement will normally contain provisions designed to ensure that the private sector has the appropriate financial incentives to meet these hand-back expectations.

Design-Build-Finance-Operate-Maintain (DBFOM)

The DBFOM maximizes risk transfer to the private sector with the transfer of the associated responsibility for the operations and maintenance of the asset.

Operations are normally differentiated from maintenance in the following way: maintenance is focused on maintaining the asset where an operation relates to delivery of the services associated with the asset. In the simple example of an airport, maintenance would relate to the building envelope, the passenger terminal building's heating/cooling/ventilation systems, etc. Operations would relate to the staffing of airport snow clearing, janitorial, serving clients, security, parking, etc. In addition to the benefits of the DBFM, the DBFOM model links operational effectiveness to all phases of the asset lifecycle and further sets operational performance requirements, which reinforce that effectiveness. This imposes yet another layer of accountability and discipline associated with project payments on the private partner. Often the private sector is compensated based on a pre-defined "availability" measure.

As with the DBFM, DBFOM project agreements will normally contain provisions aimed at ensuring the asset is in the desired condition at the end of the agreement.

6.2.6. PRIVATIZATION

Privatization is an umbrella term covering several distinct types of transactions. Broadly speaking, it means the shift of some or all of the responsibility for a function from government to the private sector. The term has most commonly been applied to the divestiture, by sale or long-term lease, of a state-owned enterprise to private investors. Another major form of privatization involves government selecting a private entity to deliver a public service that had previously been produced in-house by public employees. This form of privatization is increasingly called outsourcing.

Regardless of the mode of privatization, the common motivation for engaging in privatization is to substitute more efficient business operations for what are seen as less efficient, bureaucratic, and often politicized operations in the public sector, that operate at a loss, subsidized by all the taxpayers. In a money-losing operation, the value of the outputs is less than the value of the inputs, making the operation into value-subtracting (rather than value-adding) enterprise. The reasons for this situation are many, but generally they include explicit or implicit policy decisions that in addition to producing whatever goods or services (in our case air travel), they are also intended to provide jobs, provide its output at “affordable” prices, and accomplish other ends.

Divestiture

Generally speaking, operations that moved into the private sector are restructured, often with considerable loss of jobs, and turned into value-adding enterprises. In the case of public utilities such as airports, electricity, water, etc., privatization generally led to the creation of some form of regulatory oversight if the company remained a monopoly provider.

It is worth noting that in Canada there is not a single commercial airport with scheduled passenger and cargo traffic owned by a private company and given the operational environment of the Yellowknife Airport, it is more than doubtful that this is a potential option.

This model is characterized by a total loss of government ownership control over the assets and the operation of the assets, which are transferred to the private sector, but with a potential financial windfall for the government owner. This may take the form of an upfront payment on transfer, or a commitment to invest in defined infrastructure over a specific term.

The monopolistic situation of the Yellowknife Airport would require the establishment of a regulatory oversight regime to prevent abuse of the monopolistic situation by the private airport operator. This situation may make it even more difficult to divest and less attractive from the point of view of the government, assuming such divestiture were ever possible.

Outsourcing

There are a number of Canadian commercial airports privately operated pursuant to lease agreements with Airport Authorities, basically outsourcing, *i.e.*, where the private entity delivers the public service that had previously been produced in-house by public employees.

Under this model, the operator is a private sector company and thus outside the public governance continuum while the authority granting the lease may remain totally within the public governance realm under the various models identified above (*e.g.*, department, government corporation, airport authority or P3).

6.2.7. POTENTIAL GOVERNANCE MODEL ASSUMPTIONS

Table 7 summarizes the differences and commonality among and between the different governance options on a number of common criteria.

Table 7. Governance Options Summary

Criteria	Departmental Division (Status Quo)	Special Operating Entity - (Revolving Fund)	Crown Corporation	Airport Authority (Shared Governance Corporation)	Public-Private Partnership (P-3)
Separate Legal Structure	NO – Government Department	NO - Unit of a Government Department	YES - Commercial, Share-Capital Corporation (NWT Business Corporations Act or Special Act)	YES - Not-For-Profit, Shared Governance Corporation (non-share capital) (under Corporations Act or Special Act)	YES - Partnership with Commercial, Share-Capital, For-Profit Corporation thru P-3 Agreement
Governing Body	Government Department Head	Unit Head	Board Of Directors	Board Of Directors	P3 Board Of Directors
Appointment Authority for Governing Body	Cabinet/Premier	Government under Public Service Employment Regime	Government as Sole Shareholder	Various Levels of Government involved within framework established by Government Owner. Board recruits members to serve without recourse to owner	P3 Corporation's Shareholders
Directing Executive	Deputy Minister or Delegate	Deputy Minister or Delegate	President/CEO Appointed by Board	President/CEO Appointed by Board	President/CEO Appointed by Board
Labour Relations & HR Regime	Public Sector	Public Sector Regime – unless set aside under SOE Terms	Private Sector Regime	Private Sector Regime	Private Sector Regime
Financial Flexibility	No: Appropriations and lapsing of funds; all earned revenue to CRF	Same limitation as a Govt. Dept. (unless otherwise proscribed by the SOE Terms)	Assume financial flexibility is limited by Statute	Capacity of a Natural Person but not able to pledge assets (which are retained by the GNWT)	Capacity of a Natural Person - No limitation on financial flexibility imposed by P3 Agreement
Local Community Involvement and Transparency	No Community involvement per se	NO Community involvement per se but consultative committee created	Community could be represented on Board but otherwise, no direct involvement except thru consultative committee	By Definition, Shared Governance implies community reps on the Board	NO mandated Community Involvement per se – P3 Agreement could provide for consultative committee
Ability of Government Owner To Direct Board and Management	Under the Direction of the Minister and Deputy	Under Direction of Minister and Deputy; SOE Terms may limit ability to direct	Through Formal Directive as sole shareholder or through the Board (limited ability to direct)	Through the Board of Directors (shared governance severely limits ability to direct)	Through P-3 Agreement only
Ownership Of Capital Assets	Government Ownership	Government Ownership	Government Corporation Ownership or Indefinite Term Lease	Management and development though Long Term Lease: ownership rests with Government	Government Ownership with defined Long Term Lease for management, operation and development
Access To Capital Funding	Government Appropriations	Government Appropriations and Retained Earnings	Govt. Appropriations and Retained Earnings plus authorised borrowing on the Corporation's credit	Retained Earnings plus authorised borrowing on the Authority's credit	Borrowing on the P3 Corporation's credit; Private Capital
Procurement	Public Sector Regime	Public Sector Regime –SOE sets terms	Private Sector Regime	Private Sector Regime	Private Sector Regime
Innovation, Efficiency, Transformation, Development	Little Incentive, i.e. Financial, Labour, HR & Procurement rigidities not conducive to innovation	Some flexibility i.e. Financial, Labour, HR, & Procurement rigidities may be conducive to innovation	More flexibility (Financial, HR, Labour, Procurement, Capital) conducive to innovation	Flexible (Financial, HR, Labour, Procurement, Capital) conducive to innovation	Flexible (Financial, HR, Labour, Procurement, Capital) conducive to innovation

6.3. POTENTIAL OPPORTUNITIES & REVENUE ENHANCEMENTS

Regardless of the governance model there are certain measures that could be taken to bolster the financial performance of the airport.

7.3.1 POTENTIAL OPPORTUNITIES

Looking at just one opportunity – air cargo – the potential uplift for major northern infrastructure and resource projects has been estimated at 200,000 tons annually¹⁰³. The air cargo market is very much a derived entity with growth dependent on the rate at which the mining and oil exploration sectors grow, and how many resource finds are commercially viable.

There are a number of future mines that the NWT Govt. is supporting to provide growth in the Territory. Among these is the De Beers Gahcho Kue Diamond Mine¹⁰⁴ which is coming on line and which it is estimated could generate over 70,000 tons of air freight annually¹⁰⁵ to this one mine alone. The Ekati Jay project will be coming on-line in the near future and is the most significant undeveloped deposit at the site. It has the potential to extend the mine life beyond the current projected closure in 2020 to at least 2030. Ekati anticipates that permitting will be completed in 2016 with the start of construction in the second half of that year. In 2020, the project would supply approximately half of the ore to the process plant as Jay mining activities ramp up and the existing ore sources are exhausted.¹⁰⁶ The Canadian Zinc Company is developing the Prairie Creek Mine in the Mackenzie Mountains of the Northwest Territories. Canadian Zinc's long-term aim is to bring the mine into production at the earliest possible date. The mine is a silver and base metals property already in the advanced stages of development, with reported deposits of high-grade silver, zinc, and lead.¹⁰⁷ Over 20,000 tons of airfreight are anticipated to/from this mine site annually.¹⁰⁸ Further down the line are the Avalon Rare Earth Projects, and The Fortune Minerals Nico Mine, which has reported gold, cobalt and bismuth.

Other identified opportunities include connecting with the new Air China Cargo flight that will operate three-times weekly through Edmonton International (EIA) as it flies between Shanghai (PVG) and Dallas-Fort Worth (DFW) and which is predicated on picking up high-value minerals (such as rare-earth) mined in the NWT. Some of this cargo will be flown directly to/from the mining communities from EIA but there is potential for growth at YZF, with further potential for better service feeding into the FedEx or UPS networks, although this has yet to be defined. Supplying the resource sector and communities with food and essential domestic supplies could also present opportunities. The GNWT has discussed the potential to partner with Edmonton Airports and other economic development offices to explore air cargo opportunities.

¹⁰³ EIA Northern Cargo Opportunity Study, September 2014

¹⁰⁴ <https://www.canada.debeersgroup.com/Exploration/Gahcho-Kue/>

¹⁰⁵ EIA Northern Cargo Opportunity Study, September 2014

¹⁰⁶ <http://www.ddcorp.ca/operations/ekati-mine>

¹⁰⁷ <http://www.canadianzinc.com/>

¹⁰⁸ EIA Northern Cargo Opportunity Study, September 2014

7.3.2 ILLUSTRATIVE REVENUE ENHANCEMENTS

To illustrate the potential for change given the right alignment of the many factors highlighted in Table 7, four scenarios were modelled based on YZF's 2014 financial performance. The starting point was to recast the airport's 2014 financial statement assuming a change in governance had taken place previously, with Scenario 1 assuming minimal change while Scenario 4 assumed greater independence from government.

The starting point, or "Base Model" (Status Quo), was modified to include an upward adjustment for parking revenues that were forecast to be achieved in 2015, as well as the inclusion of \$1.4 M in estimated support costs currently being incurred by GNWT but not on the airport's financial statements as outlined earlier in this report. For clarity, a detailed modelling was beyond the scope of this study but the summary illustrates what could be achieved with some modest changes in revenue generation. For instance, it should be possible to increase the commercial revenues both in the terminal and beyond. However, this will require investment to enable this to happen. A more detailed analysis of the organization and infrastructure required to deliver the benefits illustrated here would be an important next step in developing a transition and implementation plan for any governance change should the GNWT decide to move forward.

In broad terms, the controllable revenue line items in **Scenario 3** were set to reflect the average found from an analysis of benchmarked airports: so, for instance, aeronautical fees and charges were set to 2.5 times the base level, and an AIF of \$18 introduced for passengers travelling south. In addition, an optional "Territorial" AIF of \$10 is shown separately to illustrate the magnitude of what could be achieved in terms of financial performance given modest changes primarily on the revenue side. Similar but even more conservative assumptions were made for Scenarios 1 & 2 – generally at a lower level than Scenario 3 – and a slightly more aggressive approach shown under Scenario 4.

The beneficial effect on the airport's operating line is summarised below:

- Under the enhanced Status Quo shown on Figure 32, the 2014 Net Loss amounted to some \$3.24 Million.
- Using the assumptions shown under Scenario 2, indicative of a crown corporation type structure where control is maintained by the government but is more arms-length, the airport would have moved to a point of almost break-even without a "Intra-Territorial" AIF (Net loss of approximately \$380K), or to an Operating Profit of over \$960K with a \$10 AIF for those departing passengers travelling only within NWT/NU.
- Under Scenario 3, a community-based airport authority scenario, modest increases in fees & charges (including the levee of an AIF) eliminates the current subsidy from the taxpayer, and allows the airport to balance its budget and achieve an operating profit of between \$2.9M and \$4.3M (depending on the changes implemented) which would be reinvested into the airport.
- Under Scenario 4, with privatization assumptions, the airport achieves operating income between \$5.7M and \$7.0M, which could be reinvested into the airport.

Figure 32. Financial Results Under Various Governance Options

YELLOWKNIFE AIRPORT (YZF)	YZF STATUS QUO Base Year	SCENARIOS (Note 1)				SCENARIO 4 2014 Assumptions
		SCENARIO 1 2014 Assumptions	SCENARIO 2 2014 Assumptions	SCENARIO 3 2014 Assumptions	SCENARIO 4 2014 Assumptions	
OPERATING REVENUE						
Aeronautical Revenues (Note 2)	Base	\$2,105	\$2,632	\$3,158	\$5,263	\$7,369
New Airport Improvement Fee (AIF) (Note 3)	\$0	\$0	\$1,324	\$1,986	\$2,383	\$2,648
Non-Aeronautical						
Lease revenue - ATB	Base	\$230	\$287	\$344	\$689	\$1,148
Lease revenue - Non-ATB: Land (85%) (Note 4)	Base	\$1,618	\$1,618	\$1,618	\$1,618	\$1,618
Lease revenue - Non-ATB: Other (15%)	Base	\$286	\$357	\$428	\$857	\$1,428
Concession Revenue (Note 5)	Base	\$255	\$319	\$510	\$765	\$1,275
Third Party Recoveries	Base	\$309	\$309	\$309	\$309	\$309
Total Operating Revenue		\$4,803	\$6,853	\$8,045	\$11,891	\$15,802
OPERATING EXPENSES						
Salaries and other staff related costs	Base	\$2,847	\$2,847	\$2,705	\$2,705	\$2,705
Travel	Base	\$22	\$22	\$22	\$23	\$24
Material & Supplies	Base	\$813	\$813	\$773	\$732	\$732
Purchased Services	Base	\$52	\$52	\$52	\$52	\$52
Utilities	Base	\$1,248	\$1,248	\$1,248	\$1,248	\$1,248
Contracts (Note 6)	Base	\$1,202	\$1,502	\$1,802	\$2,403	\$3,605
Maintenance	Base	\$454	\$454	\$454	\$454	\$454
Miscellaneous	Base	\$22	\$22	\$22	\$22	\$22
Total Operating Expenses		\$6,659	\$6,659	\$7,077	\$7,638	\$8,841
OPERATING INCOME (LOSS) BEFORE OTHER		-\$1,856	\$193	\$968	\$4,253	\$6,961
OTHER EXPENSES						
PILT / Property Tax	Base	\$657	\$657	\$657	\$657	\$657
External Audits	Base	\$60	\$60	\$57	\$54	\$51
Eng / Commercial / SMS	Base	\$600	\$600	\$570	\$540	\$510
Enviro Testing	Base	\$15	\$15	\$14	\$14	\$13
HR	Base	\$20	\$20	\$19	\$18	\$17
Legal	Base	\$30	\$30	\$29	\$27	\$26
Total Other Expenses		\$1,382	\$1,346	\$1,346	\$1,310	\$1,273
OPERATING INCOME (LOSS)		-\$3,238	-\$1,189	-\$378	\$2,943	\$5,688
OPTION: New Intra-Territorial AIF (Note 7)	\$0	\$0	\$1,340	\$1,340	\$1,340	\$1,340
ADJUSTED OPERATING INCOME (LOSS)		-\$3,238	\$151	\$962	\$4,283	\$7,027
Effective Cost Increase for Passenger Travelling South (Note 8)			1.45%	2.21%	2.88%	3.41%
Effective Cost Increase for Passenger Within NWT/NU with Local AIF (Note 9)			0.61%	0.65%	0.79%	0.94%

Notes to Table

Note 1	Scenarios from left to right reflect increasing level of devolution from GNWT department structure and political control
Note 2	Scenario 3 Aeronautical Revenues factored to achieve <u>approximate</u> average for benchmarked airports (AIF shown separately)
Note 3	New AIF applies only to departing pax leaving NWT ("Extra-Territorial") to go "south" (NOT including in-transit pax from communities) Extra-Territorial Enplaned/Deplaned Pax (Terminal & FBOs) - 2014 (per YZF): 264,759 Therefore, Extra-Territorial Departing Pax from YZF (Terminal & FBOs) in 2014 used in calculation: 132,380
Note 4	Land leases assumed to be at market rates as advised by YZF
Note 5	Parking assumed to be approx. 50% of 2014 concessions total. Also assumes parking revenues could have been \$200K if enhanced parking revenues forecast for 2015 had been achieved in 2014. Total for 2014 recast as: (\$110K - 50% (parking share)) + \$200K
Note 6	Indicates investment will be required to achieve revenue increases
Note 7	Additional Revenue if Intra-NWT/NU passengers pay a reduced Territorial AIF of \$10 as indicated when departing YZF Intra-NWT/NU Enplaned/Deplaned Pax (Terminal & FBOs) - 2014 (per YZF): 267,930 Therefore, Intra-NWT/NU Departing Pax from YZF (Terminal & FBOs) in 2014 used in calculation: 133,965
Note 8	Based on typical WestJet 14-day Advanced Purchase Return Fares to Calgary/Ottawa in Sept 2015 (assuming increased aeronautical and new AIF charges passed on to end-user (passenger))
Note 9	Based on typical Canadian North 14-day Advanced Purchase Return Fare to Inuvik (YEV) in Sept 2015 (assuming increased aeronautical and new Territorial-AIF charges passed on to end-user (passenger))

An important concern in any discussion on increasing revenues is: what is the likely effect on passengers and the general tax base of the NWT? On the latter point, on an operating basis, the airport is spending more than it is charging to its various clients, including its passengers. There is an implicit subsidy, and that subsidy is being funded through government appropriations. In other words, the general population is financially contributing to the operation of the airport. There are many good reasons why this is appropriate, but there are also good reasons why it might be more appropriate to reduce or eliminate the implicit subsidy to the general benefit of the taxpayer.

So what of the extra cost borne by the passenger. A recent analysis looked at the marginal effect on a departing passenger of YZF increasing its aeronautical charges to the airlines and implementing an AIF (at different levels for those passengers departing YZF to travel ‘south’ and for those only travelling to points within NWT or NU).

As can be seen from Figure 32, and assuming the increased charges proposed are passed through to the passenger in terms of a higher airfare, a departing passenger would be faced with a very modest increase when compared to the total cost of the airfare on those routes. In fact, the increases only amount to between 1.5% and 3.4% of the cost of a ticket for those travelling to Calgary or Ottawa, and less than 1% in all scenarios for passengers travelling within NWT/NU – in this case the analysis being based on a return trip to Inuvik, NWT. While this is a real, but very modest, cost increase to the leisure or business traveller, it has the beneficial effect of putting the airport on the road to financial self-sufficiency.

The governance question here is: can these changes be effected under the current governance model? The answer based on the evidence at not only other airports but at a range of utilities and other essential infrastructure is: probably not. There is a negative correlation between political and bureaucratic control, enterprise flexibility and business focus, particular the ability to raise fees and charges to even a break-even level. Put another way, to achieve meaningful revenue enhancements it will be necessary to reduce bureaucracy and put the airport operation beyond political control as part of the change in governance. This is both the opportunity and the challenge facing the GNWT.

7. FINDINGS

Key Findings

There are five key findings from this study.

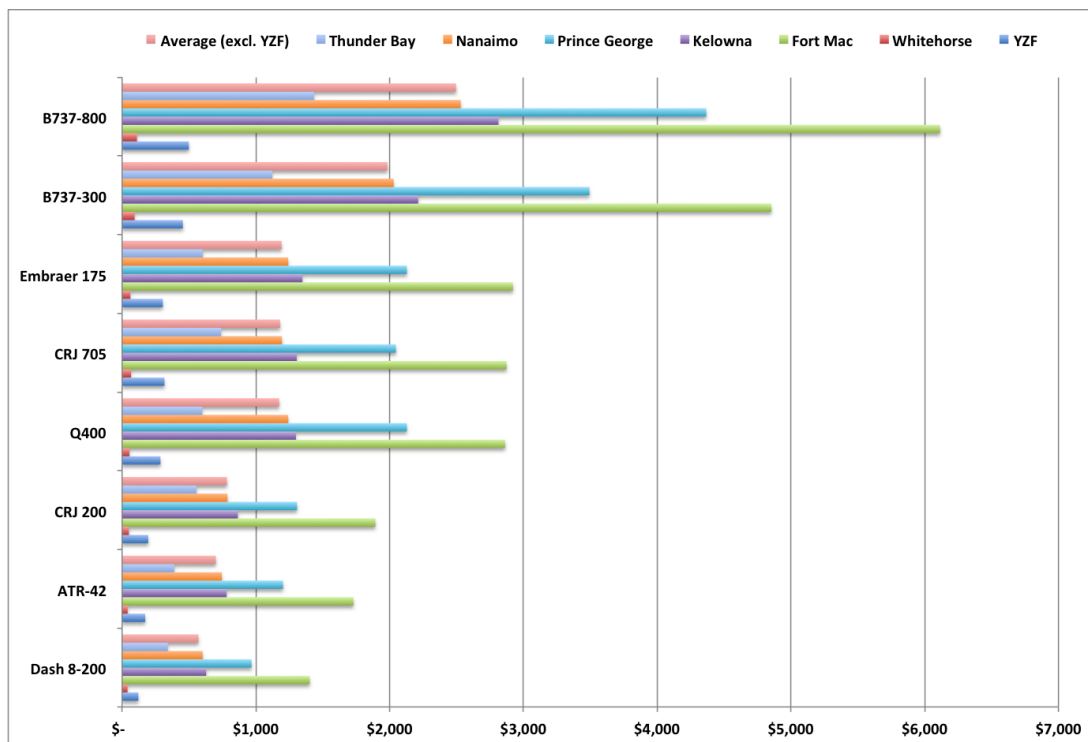
Finding #1

YZF provides value to the broader GNWT by being a well-run airport with a dedicated and well-managed workforce. In turn it is well supported by, and actively partners with, other Government departments. However, there is an implicit subsidy currently of some \$3 Million under the status quo arrangement which will likely continue without a change in the underlying governance of this essential piece of NWT economic infrastructure.

Finding #2

The GNWT does not need to give up ownership of the Yellowknife Airport for it to be viable. YZF has the passenger flow and airline competition to be self-sustaining on a commercial basis. Yet, the fees and charges levied by the airport are significantly lower than its peers, including smaller airports. The following table highlights the differences between airports.

Fees and Charges at YZF Versus Peer Airports



Finding #3

If an effective revenue and expenditure framework was instituted, the airport would not require annual operating subsidies from the Department of Finance (some \$3 Million per fiscal year).

As the airport is run by a government department, the natural constraints of government operations have historically driven decisions, as opposed to commercial considerations. For example, income for the airport comes from the consolidated fund and is often the source of both political debate (budget setting), and internal departmental policy (allocation between all NWT airports). Most, if not all commercially viable airports across the country raise sufficient direct revenues from airlines, passengers and concessions to pay for operating and capital expenses without needing to resort to the general taxpayer. In this sense, Yellowknife could be considered an outlier.

Nothing prevents the GNWT from operating the airport like a commercial entity and raising fees to pay for services. However, the reality is that fees associated with running YZF have not risen to the degree that costs have over the past 20 years. Governments across the globe, including Canada, have come to realize that changing governance often leads to better outcomes for the users and the community, in large part because airports can be singularly focussed on commercial viability and service. This is why most airports are run outside of government.

Finding #4

Without changes to the governance and operations of the Yellowknife Airport, the general taxpayers of GNWT will continue to subsidize the cost of the airport unnecessarily. Moreover, there will be lost opportunities: greater collaboration with the community, gains from economic spin-offs, and capital investments in other areas will not be realised.

By creating some distance from a line department and raising fees and charges to the average of peer airports, YZF would still be competitive but would no longer require subsidies from the GNWT, leaving those savings for other priorities of the Government. Moreover, the analysis demonstrates that the increase in fees and charges to the peer-average will cost the user (passenger) approximately 2% to 3% increase in ticket price for a typical return flight “south” from YZF (based on September 2015 sample fares) and less than 1% for a typical intra-NWT flight as shown in Table 32.

Finding #5

Comprehensive change management will be required in order to move away from the status quo – legal, organizational, communication, HR, business modelling. However, in the judgement of the consultants, this short-term effort will benefit the airport, taxpayers, users and broader Yellowknife community in the long run.

But what model might work best for the Yellowknife Airport? The report does not recommend a specific governance model, rather it takes the view that any movement away from the status quo will benefit both the taxpayers of the GNWT and the services that users of the airport experience.

To illustrate the point a financial model was developed and various financial scenarios run to illustrate what the net effect might have been had certain changes been implemented in 2014. The Base Year used was the actual 2014 results. The various factors applied and assumptions used are illustrated in Table 1. Based on these scenarios, the beneficial effects on the airport's operating line are summarised below:

- Under the Status Quo, the 2014 Net Operating Loss amounted to some \$3.238 Million.
- Using the assumptions shown in Scenario 2, indicative of a crown corporation type structure, control is maintained by the government but is more arms-length. Assuming the distance from government control over day to day matters allows the crown corporation greater freedom to operate on a commercial basis, the airport would move to a small operating profit if a \$10 Airport Improvement Fee (AIF) for all departing passengers was introduced.
- Under Scenario 3, a community-based airport authority scenario, modest increases in fees & charges (including the levee of an AIF) eliminates the current subsidy from the taxpayer, and allows the airport to balance its budget and achieve an operating profit of between \$2.9M and \$4.3M (depending on the changes implemented) which would be reinvested into the airport.
- Under Scenario 4, with privatization assumptions, the airport achieves operating income between \$5.7M and \$7.0M, which could be reinvested into the airport.

As noted in the report, nothing prevents the GNWT from raising these fees under the status quo. However, history (and the infrastructure case studies) demonstrate that moving towards an alternative governance model would free YZF from political constraints, allow it to be driven by market considerations, give it access to capital, enable broader community engagement and likely stimulate some economic spin-off.

8. TRANSITION CONSIDERATIONS

Should the GNWT choose to move away from the status quo to one of the options laid out in this report, a comprehensive change management plan will need to be considered. In that instance, the recommendation would be to implement the change in one, well-planned and well-explained exercise.

However, should the GNWT choose to transition change over a longer period of time, the following interim approach might be considered:

- Identify and record all revenues and expenses for YZF as part of the GNWT annual budget and audit.
- Appoint an advisory board – ideally made up of representation from the city, the government, the business community and other members of civil society.
- Task the advisory board to provide advice and assistance to the Minister on the revenues, expenditures and operations of YZF. Indeed, the advisory board should be tasked with submitting a plan to the Minister on how to eliminate the annual GNWT subsidy to the airport.
- Appoint an interim executive from within the GNWT to lead the organization and to support the advisory board in developing its plan for the minister.
- Provide the executive with the information required to support the board as it deliberates on a plan, including projections on finances, asset management, cargo and passengers.

All of the above can be accommodated without changes to legislation.

9. TASK CHECKLIST

Determine the pros and cons of governance models: **Please see Section 6**

- a. Status Quo;
- b. Special Operating Agency/Revolving Fund;
- c. Government Corporation;
- d. Airport Authority;
- e. Concession; and
- f. Privatization.

The review addressed key questions under five broad themes: Airport operations cost and revenues:

- a. What are the costs of owning and operating YZF? **Please see Section 4**
- b. What revenues could be derived from those operations under various governance models? **Please see Section 6**
- c. How do these costs and revenues compare to other airports in Canada of a similar size? **Please see Section 5 and Appendix D**

Current issues: **Please see Section 4**

- a. What are the current operational needs of YZF?
- b. What are the short and long term capital expansion requirements?

Policy and regulation: **Please see Section 4**

- a. How are operations impacted by fiscal and operational policy?
- b. What policies or procedures impact capital?
- c. What policies impact existing and new revenue streams?
- d. How would efficiency or effectiveness be improved by changing policies or procedures?

Governance considerations: **Please see Section 6**

- a. How are capital needs met today?
- b. Can the current governance model address those needs?
- c. Is YZF of sufficient size to operate independently?

Market impacts: **Please see Section 3 thru 7**

- a. What general impact would an alternative governance model have on the people of the Northwest Territories?
- b. What effects would various models have on air carriers operating in the market?
- c. From a GNWT perspective, what are the financial, political, legal and socio-economic impacts of the governance models identified?
- d. How can the Airport become a catalyst for economic development in the region?

APPENDIX A – LIST OF ORGANIZATIONS CONTACTED

The following organizations were contacted by the Consultant team during the course of this study. While all organizations / people were contacted, most but not all were available for interview.

ORGANIZATION	PERSON	TITLE
GNWT	Mike Aumond	Deputy Minister, Finance
GNWT	Russell Neudorf	Deputy Minister, Transportation
GNWT	Peter Vician	Deputy Minister, Industry, Tourism & Investment
GNWT	Sandy Kalgutkar	Deputy Secretary of the Financial Management Board
GNWT	Delia Chesworth	Director, Airports Division
GNWT	Michael Conway	Regional Superintendent, North Slave Region
GNWT	Lee Stroman	Regional Airport Manager, YZF
GNWT		
GNWT	Kevin Todd	A/ADM – Director, Investment & Economic Analysis
GNWT	Gary Brennan	Finance, North Slave Region
NWT & Nunavut Chamber of Mines	Tom Hoefer	Executive Director
NWT Chamber of Commerce	Mike Bradshaw	Executive Director
City of Yellowknife	Jeffrey Humble	Director of Planning & Development
City of Yellowknife	Nalini Naidoo	Director, Communications & Economic Development
Kelowna Airport / City of Kelowna	Sam Samaddar	Airport Director
Nanaimo Airport Commission	Mike Hooper	CEO
Fort McMurray Airport Authority	Jim Meyer	Special Advisor to YMM
JA Douglas McCurdy Sydney Airport Authority	Helen MacInnis	CEO
Iqaluit Airport	John Hawkins	Airport Director
Port Alberta (EIA)	Norm Richard	Director, Air Service Development
Tourism Aurora Village	Don Morin	President

APPENDIX B – LIST OF DOCUMENTS AND DATA REVIEWED

The following reports and documents were reviewed as part of this study.

DOCUMENTS / REPORTS

YZF Airport Governance Review (Draft) prepared for GNWT's DOT, Thunder Bay Airport Services (March 2014)

Alternate Governance: A Review of Governance Options for the Yellowknife Airport, Leland Strom (undated)

NWT Airports Brochure 2013

Yellowknife Airport Operation & Management – A Strategic Review, Thunder Bay Airport Services (August 2010)

Air Accessibility in Northern Canada: Prospects and Lessons for Remote Communities, Mendes, Neville, and Costa (undated)

Yellowknife Airport Governance Transfer, LPS Avia Consulting (July 7, 2008)

Yellowknife Airport Development Plan Update, InterVISTAS Consulting Inc. (March 2008)

Planning for the Future – the Yellowknife Airport (YZF) Development Plan Summary, GNWT/DOT (November 2004)

Yellowknife Airport Stakeholders Panel – Report to the Minister of Transportation, Volumes 1 and 2, DOT (June 2003)

Analysis of and Recommendations for A New Governance Model for Yellowknife Airport, Hopkins & Associates Inc. (December 2002)

Public Airports Act, S.N.W.T. 2006, c.5 last amended by S.N.W.T. 2011, c.8

Public Airports Fees Regulations R-019-2006, Amended by R-097-2014, in force October 1, 2014

Public Airports Traffic Regulations R-037-2015

Commissioner's Public Airport Lands Regulations, R-020-2006, last amended by R-078-2014

Summary Conviction Procedures Regulations R-014-92, last amended by R-038-2015

"NWT Mining: Where we're at / where we are going, presentation by NWT & Nunavut Chamber of Mines, Tom Hoefer (April 2015)

"Air Transportation Infrastructure in Canada's Territories", submitted by the NWT Chamber, Territorial Policy Committee (2013)

"Challenges and Opportunities" – prepared by Delia Chesworth, Director Airports Division, GNWT (April 2015)

Transfer Agreement between Federal Government and GNWT under the NAP (July 1, 1995)

EIA: Northern Cargo Opportunity Study, Edmonton Airports (September 2014)

ACRP Report 66: Considering and Evaluation Airport Privatization (March 2012)

AENA's Part Privatisation, CAPA Aviation Analysis (April 14, 2015)

Canadian Airport Privatization, Neil Raynor, Sypher:Mueller (July 22, 2005)

Airport Privatization - Issues & Options for Congress, Rachel Y. Tang, Analyst in Transportation and Industry, US Congressional Research Service (May 12, 2014)

ICAO Case Study on Commercialization, Privatization and Economic Oversight of Airports and Air Navigation Services Providers (January 9, 2013)

The following data was reviewed as part of this study.

DATA

YZF Operating Financial Statements, 2003-2013

YZF 20 Year Needs

YZF Capital Assets

DOT Regional Superintendent North Slave and YZF Organizational Charts (May 20, 2014)

YZF Fees and Charges (Oct. 1, 2014)

YZF Tenant List

YZF Organization Chart (Updated 2/2/2015)

YZF Orthophoto Year 2012 (105-1403.dwg)

CATSA Maintenance Contribution and Support Agreement 2008-2013, Version 1, (Contract No. YZF-2008-MA) (Nov. 13, 2007)

NAV Canada & GNWT Aviation Services and Facilities Agreement Yellowknife (March 30, 1999)

Airport Fees and Charges Tables from YXY, YFB, YMM, YLW, YXS, YCD, YQT

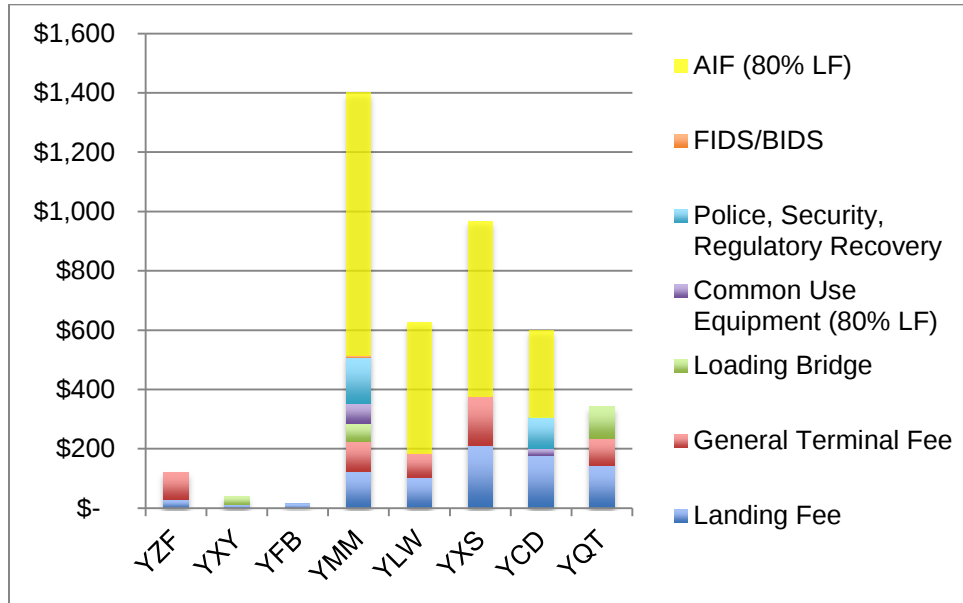
APPENDIX C – BENCHMARKING SUMMARY

	Yellowknife (YZF)	Kelowna (YLW)	Fort McMurray (YMM)	Whitehorse (YXY)	Iqaluit (YFB)	Prince George (YXS)	Thunder Bay (YQT)	Moncton (YQM)	Charlottetown (YYG)	London (YXU)	Nanaimo (YCD)
TRAFFIC & AIR SERVICE											
Passengers (E/D) - 2014	359,384	1,607,991	1,166,540	305,179		435,128	739,837	649,427	317,150	479,928	
Passengers (increase from 2013)	0.9%	1.2%	6.3%	13.3%		-1.6%	-0.3%	0.8%	5.5%	5.1%	
Passengers (E/D) - 2013	356,227	1,589,476	1,097,457	269,326		442,314	742,192	644,273	300,754	456,545	225,251
source: Stats. Can. 51-203-X (2013) updated											
Total Movements - 2014	52,881	77,492	72,114	22,879	19,102	43,865	101,514	73,872	13,343	65,371	34,548
Total Itinerant Movements - 2014	44,683	54,074	65,324	17,163	18,578	29,383	6,023	44,202	11,023	36,667	23,742
Itinerant as % of Total Mvmts - 2014	84%	70%	91%	75%	97%	67%	6%	60%	83%	56%	69%
Tot. Itin. Mvmts % increase from 2013	5%	6%	-7%	-11%	1%	15%	-90%	14%	0%	-5%	10%
Total Movements - 2013	51,965	75,479	78,669	29,071	18,866	39,659	97,889	60,197	12,657	69,054	33,874
Total Itinerant Movements 2013	42,543	51,083	70,255	19,383	18,316	25,641	59,479	38,885	11,067	38,762	21,596
Itinerant as % of Total Mvmts - 2013	82%	68%	89%	67%	97%	65%	61%	65%	87%	56%	64%
Tot. Itin. Mvmts % increase from 2012	-13%	6%	6%	-2%	0%	4%	157%	58%	-67%	81%	6%
source: Stats. Can. 51-203-X (2013) updated											
Total Cargo (tonnes) - 2014		2,296				1,120		21,262			
Total Cargo (tonnes) - 2013		2,254				1,059	1,487	19,759		183	
Cargo - increase from 2013		2%				6%		8%			
source: Stats. Can. 51-203-X (2013) updated											
FACILITIES & SERVICES											
NAV Canada	Tower	Tower	Tower	Tower	FSS	Tower	Tower	FSS	FSS	Tower	FSS
# Runways	2	1	1	2	1	3	2	2	2	2	
Longest Runway	7,503'	8,900'	7,503'	9,500'	8,605'	11,450'	7,318'	10,001'	7,000'	8,800'	
NAV Aids	NDB, VORTAC, ILS	NDB, DME, ILS	NDB, VOR/DME, ILS	NDB, VOR/DME, DME, ILS	NDB, VOR, DME, ILS	NDB, VOR/DME, ILS	NDB, VOR/DME, TACAN, ILS	NDB, VOR/DME, ILS	VOR/DME, ILS	NDB, VOR/DME, ILS	
Customs	AOE/15	AOE/30	No (but had with Vegas flight)	AOE/50	AOE/15	AOE/30	AOE/40	AOE/225	AOE/60	AOE/180	AOE/20
ARFF	Cat 6	Cat 6	Cat 6	Cat 7	Cat 5	Cat 5	Cat 6	Cat 6	Cat 6	Cat 6	
Fuel	100LL, JA-1, F-34	100LL, JA-1	80, 100LL, JA-1, JB, FSII	100LL, JA, FSII	100LL, JA-1	100LL, F34, JB, HPR	100LL, JA-1, JB, HPR	100LL, JA-1, FSII	100LL, JA-1	100LL, JA-1, F34, FSII	100LL, JA-1, FSII
FBOs	Midnight Petroleum (Esso) Diamond Aviation (Shell)	Shell Aerocentre	Exec. Flt Ctr (Esso) Progressive Aviation (Shell)	North of 60 Avn Ctr Air North	Uqsuq Corp	Esso, Shell, Ron's Aviation (Imperial Oil)	Shell, Esso	PLH, Shell Aero, Bulmer Acft, Moncton Flight College, Skylink	Irving Oil, ASIG	B&W Aviation, Exec Aviation	Flight Fuels

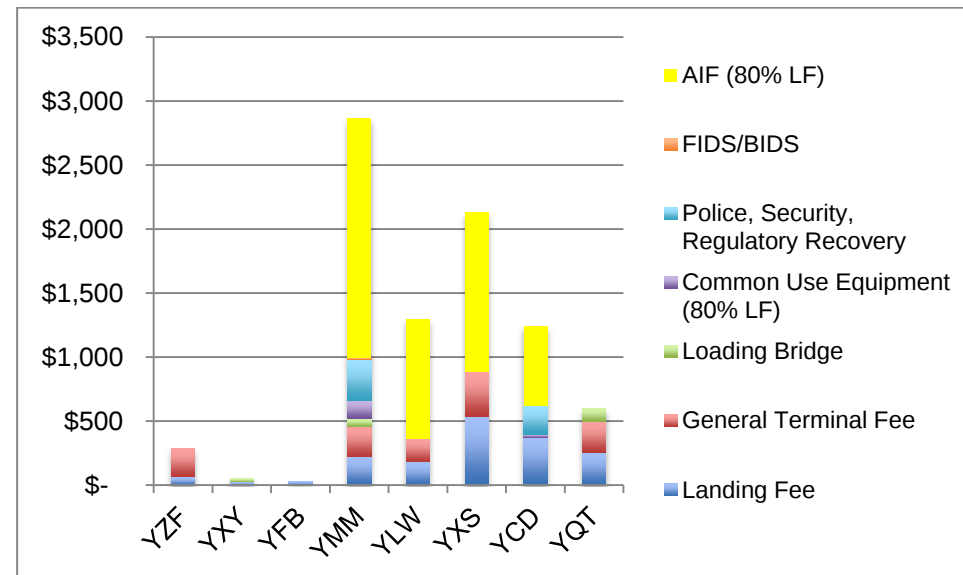
	Yellowknife (YZF)	Kelowna (YLW)	Fort McMurray (YMM)	Whitehorse (YXY)	Iqaluit (YFB)	Prince George (YXS)	Thunder Bay (YQT)	Moncton (YQM)	Charlottetown (YYG)	London (YXU)	Nanaimo (YCD)
OWNER / OPERATOR											
Owner	Territorial Gov't	Fed. Gov't Fed Gov't (leased to City under LT lease expiring 2034)	Municipality	Territorial Gov't	Territorial Gov't (moving to P3)	Fed. Gov't	Fed. Gov't	Fed. Gov't	Fed. Gov't	Fed. Gov't	Airport Commission
Operator	Territorial Gov't		Airport Authority	Territorial Gov't		Airport Authority	Airport Authority	Airport Authority	Airport Authority	Airport Authority	Airport Commission
NAP Category	NAS / Arctic	NAS	Regional / Local	NAS / Arctic (confirm)	NAS / Arctic (confirm)	NAS	NAS	NAS	NAS	NAS	Regional / Local
# Staff (airport) - FTE	32	38.5									11
# Contracted Staff - FTE											
Contracted Services (incl. services by other gov't departments)	finance, admin, legal, HR, planning, engineering	Facilities Mgt & Technical Servicesfinance, admin, legal, HR, planning, engineering									# unknown parking, janitorial, landscaping, vegetation ctrl, winter maintenance, security, airside maintenance, fire response
FINANCIALS											
Total Revenue (incl. AIF) per E/D pax - 2013	\$13.71	\$16.44	\$33.37			\$23.94	\$14.48	\$26.44	\$28.50	\$22.06	\$15.13
Operating Revenue (excl. AIF) per E/D pax - 2013	\$13.71	\$9.43	\$17.59			\$15.21	\$14.48	\$17.22	\$18.25	\$15.05	\$10.84
Aeronautical Revenue (landing & terminal fees only) per E/D pax - 2013	\$6.45	\$3.55	\$8.26			\$8.26	\$4.13	\$9.80	\$6.72	\$5.87	\$4.90
Non-aeronautical Revenue per E/D pax - 2013	\$7.15	\$5.88	\$9.33			\$6.95	\$10.36	\$7.42	\$11.54	\$9.18	\$5.94
Operating Expenses (excl. interest & dep'n) per E/D pax - 2013	\$17.78	\$7.26	\$13.64			\$13.44	\$9.40	\$22.05	\$17.73	\$14.05	\$11.38
EBITDA (excl. AIF) - 2013	-\$1,453,401	\$3,203,823	\$4,172,000			\$756,802	\$3,761,247	\$1,122,333	\$150,722	\$455,238	-\$121,260
EBITA per E/D pax (excl. AIF) - 2013	-\$4.07	\$2.17	\$3.95			\$1.77	\$5.08	\$1.76	\$0.52	\$1.00	-\$0.54
Profit Margin (net income / total revenues) - 2013 (incl. all AIF revenues, and interest & dep'n exp)	-0.30	0.34	0.59			0.29	0.35	0.42	0.38	0.36	0.25
AIF (2015)	\$0	\$15	\$30			\$20	\$0	\$15	\$20	\$15	\$10

APPENDIX D – AIRCRAFT TURNAROUND COSTS

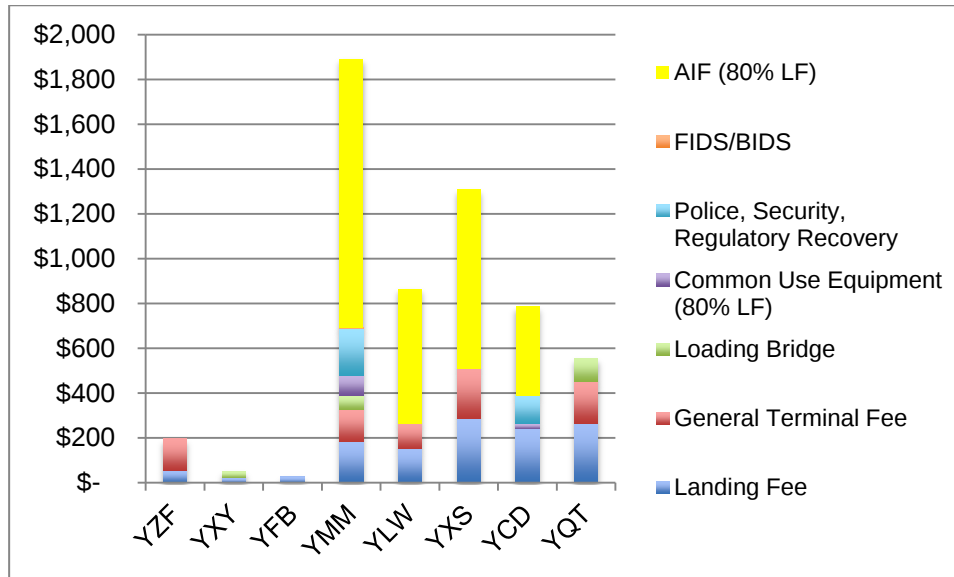
Aircraft Turnaround Costs – Dash 8-200



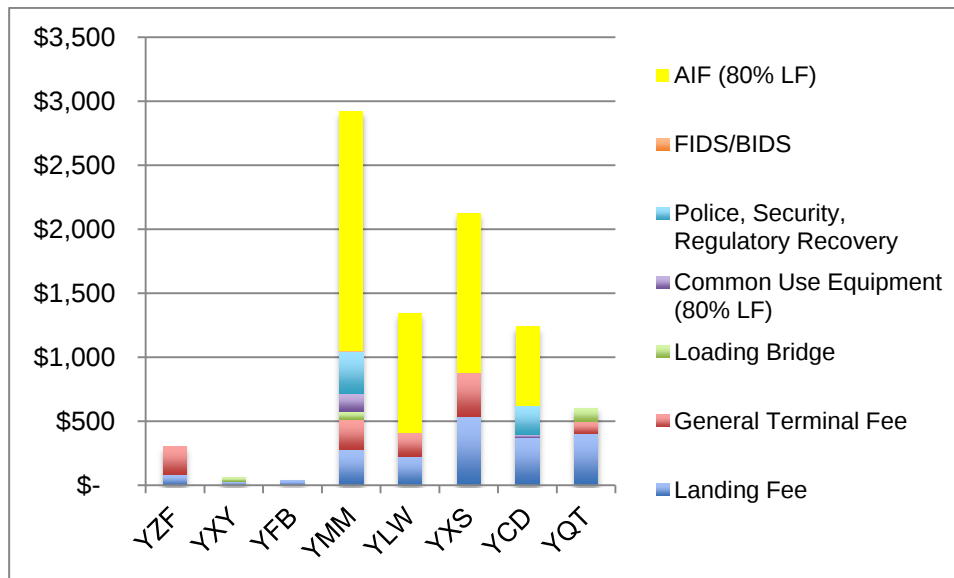
Aircraft Turnaround Costs – Q400



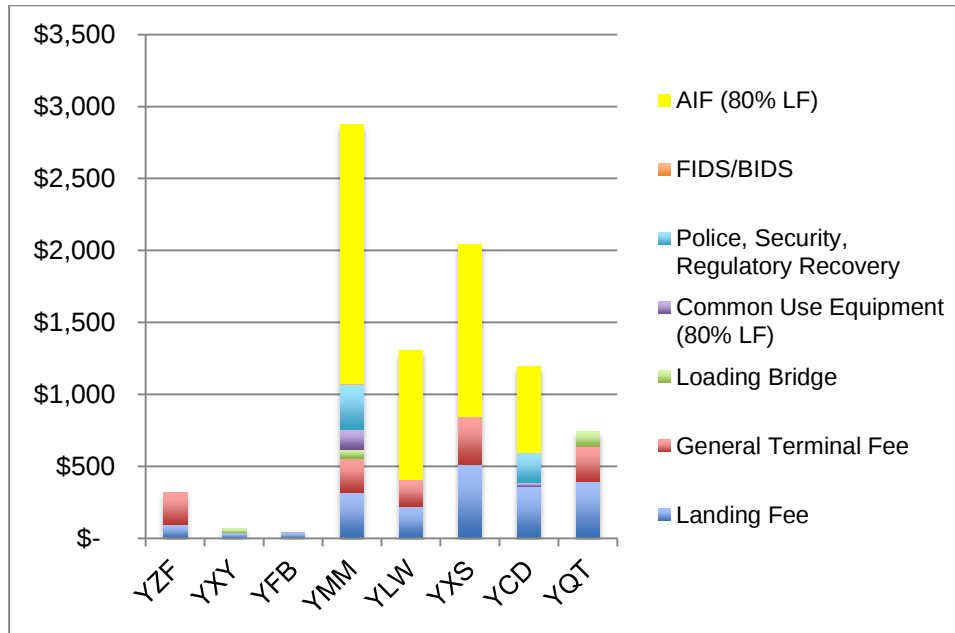
Aircraft Turnaround Cost – CRJ-200



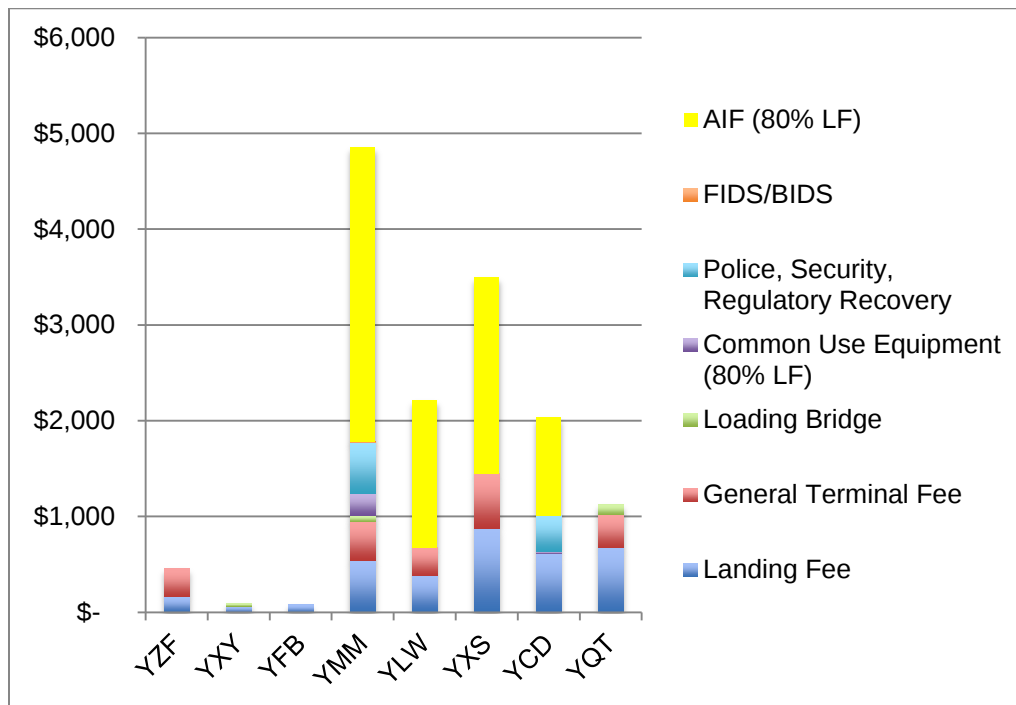
Aircraft Turnaround Cost – Embraer 175



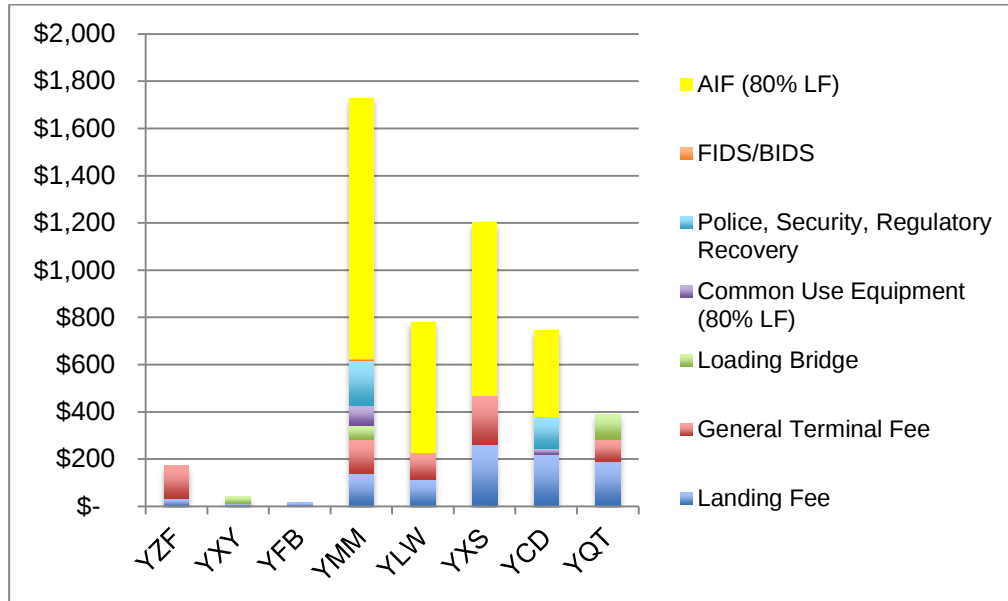
Aircraft Turnaround Cost – CRJ-705



Aircraft Turnaround Cost – B737-300



Aircraft Turnaround Cost – ATR42



Aircraft Turnaround Cost – B737-800

