ATLANTIC GATEWAY OPPORTUNITIES AND CHALLENGES

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OVERVIEW

The prospect of developing a major North American trade gateway in Atlantic Canada is seen as a major economic opportunity for the Region. The range of opportunities include increased demand for transportation services, new business opportunities such as trade processing and distribution operations and improvements in the transportation system serving Atlantic Canada.

The Greater Moncton Area (GMA) has identified the opportunity to expand its role as a regional transportation and distribution centre to include trade processing and distribution services for Eastern North American. To this end it has established the business framework for the Canada East Inland Port (CEIP). CEIP proposes to build on the development of Halifax (and other Atlantic Canada ports) as a North American gateway. The GMA also recognizes that it is geographically positioned to participate in the growing international air freight business.

International trade is already an important element of the economy of New Brunswick with $22 billion of exports and $18 billion of imports in 2005. The commodities that are of interest for CEIP processing are the higher value manufactured goods and perishables that are more likely to be transported by air and containers. These higher value commodities also present greater opportunity for adding value to the supply chain.

A recent study[1] identified that the most immediate opportunity for the Canada East Inland Port is to participate in the intermodal shipment of goods by air over the Atlantic and by surface within North

[1] ADI Limited, Canada East Inland Port – A Feasibility Study, 2006.

America. This would include the assembly of Atlantic region perishable exports for Europe and onward to Asia, where transportation cost savings are achieved over existing supply chains via Montreal or Boston. Secondly, imports to the U.S. could tranship from air to road in-bond. There is also potential for U.S. exporters to use the inter-modal option via GMA.

Two other opportunities identified for inclusion in the CEIP business plan were:

- The entry processing of marine containers for Atlantic Canada distribution, for onward shipment to Central Canada, and especially for onward shipping to New England. This latter opportunity relates to greater use of Halifax as an east coast gateway for North America, where the CEIP would support and enhance the Atlantic Gateway roles of the ports of Halifax and Saint John.

- Whether by marine container or by air, there is growth potential in the regional distribution of consumer goods imports. GMA has already demonstrated that it has strategic advantages in this market and there are additional opportunities such as developing a regional distribution center to serve provincial liquor operations.

The Study concluded that the GMA can be competitive with existing trade gateways and has comparable infrastructure with other inland port developments in central North America and Western Europe. The immediate requirement is for a suitable organization with a mandate and initial funding to begin implementation of the Canada East Inland Port concept.

INTRODUCTION

The Canada East Inland Port proposition is based on a number of opportunities where the handling of foreign goods might be increased to grow the logistics industry of the GMA, including various value adding activities, all in support of regional economic development. The central idea is the recent development of a new approach to "inland" ports. Traditionally, inland ports have been on waterways where bulk goods have been transferred from ocean-going ships to barges or other specialty vessels for continuing carriage inland by the most economical of modes, water. But over the past ten years, the term has come to be applied to other inland points that are not on waterways.

Greater Moncton is located 290 km from the Port of Halifax and 155 km from the Port of Saint John with direct rail and four lane highway connections. Furthermore, several hundred flights a week, including fifty wide-bodied freighter aircraft, over fly GMA every week between North America and Europe. The Greater Moncton International Airport (GMIA) has the facilities, and the expanding Dieppe Industrial Park (DIP) has the land to serve as a Huntsville or Alliance -like inland port role.

What is an Inland Port?

An Inland Port has been defined as: "a site located away from traditional land, air and coastal borders with the vision to facilitate and process international trade through strategic investments in multi-modal transportation assets and by promoting value-added services as goods move through the supply chain". This definition was developed in the pioneering work conducted in 2000-2002 by the Center for Transportation Research at the University of Texas at Austin (UTA) on behalf of the Texas Department of Transportation. The three key points of the definition are the location, which is non-traditional, the focus on international trade and value added processing, and the requirement for multi-modal assets.

The UTA also developed a classification of inland ports:

Inland Waterway Port: The term was originally coined to describe locations on navigable waterways and the term "port" was still seen as applicable. The key distinction was only in the sort of vessels that could serve these ports: ocean-going ships versus barges and great lake freighters. Historically, these inland ports have served mainly bulk commodities but there is increasing carriage of containerized freight today.

Air Cargo Ports: Air cargo has grown more rapidly than passenger demand in recent years. While 50 percent of air cargo still travels in wide-body passenger aircraft, known as combination services, an increasing portion is going by all-cargo aircraft.

Maritime Feeder Inland Ports: These are developed by congested ports as part of their overall system. The Port of New York & New Jersey is developing a set of inland ports connected by rail or short sea shuttles to move some processing away from the main port. The Port of Halifax has also released its own study for such a development.

Trade and Transportation Centers: These are locations where border processing is moved inland, generally in conjunction with offering various modes of transportation where supply chain efficiencies are accomplished by combining trade processing with intermodal transfers, with the opportunity for value added processing at the same time.

The interest in the GMA is to develop either or both of the second and third categories, towards becoming a *Trade and Transportation Centre*.

THE GREATER MONCTON AREA INFRASTRUCTURE AND SERVICES

The GMA has served as a transportation and distribution centre for Atlantic Canada for many years. This role dates back to the early days of Canada when it was a marine transportation and shipbuilding centre, through the eventual development of railways, road transportation and air transportation. The GMA has both the developed infrastructure as well as the strategic location to efficiently serve Atlantic Canada and New England. This experience, infrastructure and location also positions the GMA to play a key role in the Atlantic Gateway initiative serving North Atlantic trade.

- **Air Transportion**

Greater Moncton International Airport (GMIA) is the key air transportation asset providing passenger and air freight services to a large part of New Brunswick, Prince Edward Island and Western Nova Scotia. Air freight transportation services in GMA are primarily provided by the integrated freight carriers; "integrators" use their own specialized sort facilities rather than common use facilities, and provide integrated door-to-door service (examples include Federal Express and Purolator).

- **Road Transportation**

The Greater Moncton Area is a major Atlantic Canada hub for the trucking industry due to its strategic location and developed highway infrastructure. The Atlantic Canada highway network forms a hub and spoke network with the GMA as the hub and national highway connections to all the Atlantic Canada centres as well as connections to Quebec and the US.

- **Rail Transportation**

Moncton is a major railway centre for Atlantic Canada and connections to the US. Rail service within New Brunswick is provided by Canadian National (CN) and a network of shortline railways. The CN line in Atlantic Canada runs from Nova Scotia, through GMA and on to Quebec and Ontario. CN also operates a rail

line from the GMA to the Port of Saint John and for connections with the New Brunswick Southern Railway and on to New England.

- **Warehousing**

GMA's storage and warehousing facilities include public warehousing companies, truck transportation companies and private facilities. The facilities include both cold storage and heated services. There is not a significant surplus capacity available currently, neither is there a suitable modern warehouse with temperature controlled facilities adjacent to the airport. Nevertheless, the private sector, whether local, national or international firm(s) could be expected to quickly respond to any demonstrated increase in demand.

- **Distribution**

The GMA has a major cluster of companies that provide distribution and logistics services. These companies include the large freight integrators (such as FedEx, Puralotor and DHL) regional and local couriers, major logistics companies (Matrix, Ryder, Armour, and Andlauer) large and small distributors as well as other related services. Major retailers have established Atlantic Canada distribution centres in the GMA due to its strategic location, transportation services, cost competitiveness, bilingual work force and other factors. Examples are Coop Atlantic, Kent Building Supplies, and Shoppers Drug Mart.

SELECTION OF TARGET EXPORT COMMODITIES

The review of potential target export commodities focused on:

- commodities that will make a significant contribution to New Brunswick economic development
- high value to volume commodities
- niche commodities that are not well served providing opportunities for adding value

Exhibit 1 identifies the potential target commodities that fit these criteria. The targeted commodities are divided into perishable products and manufactured goods.

Exhibit 1
Target Commodities – Atlantic Canada Exports

Exports to the U.S.	Exports to Europe	Exports to Asia
Perishable and Temperature Controlled Products		
crustaceans - live, fresh, chilled, frozen	crustaceans - live, fresh, chilled, frozen	crustaceans - live, fresh, chilled, frozen
crustaceans, molluscs prepared or preserved	crustaceans, molluscs - prepared or preserved	frozen fish (excl fish fillets)
potatoes and other vegetables - frozen	molluscs - live, fresh, chilled, frozen	molluscs - live, fresh, chilled, frozen
fresh or chilled fish (excl fish fillets)	fruits and nuts – frozen	fish fillets and other fish meat
fish fillets and other fish meat	fish - dried, salted, smoked	fruits and nuts - frozen
molluscs - live, fresh, chilled, frozen	frozen fish (excl fish fillets)	crustaceans, molluscs - prepared or preserved
fish, caviar prepared or preserved	fresh or chilled fish (excl fish fillets)	fresh or chilled fish (excl fish fillets)
potatoes - fresh or chilled	raw fur skins	potatoes and other vegetables - frozen
	fish fillets and other fish meat	potatoes - fresh or chilled
Manufactured Goods		
pneumatic tires of rubber	turbo-jets, turbo-propellers	navigational instruments and appliances
uncoated paper and paperboard	motor vehicles for passenger transport	rape (canola), colza or mustard oil
windows, doors, shingles and shakes, panels	uncoated paper and paperboard	uncoated paper or paperboard
motor vehicle parts	parts of helicopters, airplanes	insulated wire, cable; optical fibre cables
Furniture	parts for machinery	animal or vegetable fertilizers
	other machinery nes	pet food and animal feed preparations
	navigational instruments and appliances	

THE BUSINESS CASE

A number of the targeted commodities were selected to develop or test the business case for the CEIP. Two approaches were taken. The first approach was to identify the opportunities by mode and market based on cost advantages. The second was to test the attractiveness of a CEIP centred supply chain for targeted commodities.

The Opportunities

- **Air Cargo**

Atlantic Canada exports perishables, particularly seafood. There is also a smaller volume of high value manufactured goods that are shipped by air. These goods are typically trucked to air mode gateways in Central Canada or New England. There would be a savings in both cost and time if these products could be assembled for shipping directly from GMA to European/Asian markets or new markets in the southwest U.S. or Latin America. The international air routes already pass over GMA. Carriers may be enticed to stop at GMA, even for a partial load, as space is more available on eastbound routes. The need is for an entity to coordinate shipper needs and arrange for air capacity from GMA. This is the market that was tested by examination of selected commodities and their industries.

- **Air-Truck Intermodal**

Within the total distribution cost (TDC), there are goods that can not justify the air mode's higher rates but that are compromised by the time required for sea shipping. These goods achieve their lowest TDC by combining a faster-costlier mode for part of the journey with a cheaper slower mode for the other portion. Today's logistics practitioners focus on "time-definite-delivery" rather than the fastest mode. Where they make their transfer, is a good spot to also arrange trade processing services, and even value added processing.

$625 billion of goods crossed the North Atlantic in 2005 (expected to reach $750 billion by 2008).[2] As well, 60% of trade is westbound, the direction against prevailing winds thus requiring more fuel resulting in less payload. Stopping the aircraft at GMA, for intermodal transfer to truck, would both reduce transport costs and better balance loads for greater efficiency. And the air freighter returning eastbound, even though U.S. origin freight coming in by truck may be less, can top up its load with Atlantic Canada perishables (notably seafood).

The target case studies for the Atlantic Canada regional export assembly sought to eventually justify two or three wide-bodied freighter aircraft departures per week. However, to keep the magnitude of the respective opportunities in perspective, and based on typical findings that 25% (by value) of goods move by air cargo, at an intrinsic value of $5 per kg, capturing just 1% of the North Atlantic air market for intermodal transfer at GMIA could mean five air freighter arrivals daily.[3]

- **Processing Marine Containers**

Companies such as Atlantic Coop are already bringing marine containers to their distribution centre in GMA for trade processing followed by value added processing (e.g. re-packaging for retail sales).

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[2] The figures include all modes of transportation and in both directions. Currently there is more traffic from Europe to North America (versus to Europe from North America but the forecast anticipates that North America to Europe traffic grow at a faster rate over the next three years. Source: The Economist Magazine, June 17, 2006.

[3] That is, 25% of $625 billion is $156 billion value by air, at $5 per kg is 31 billion kg. 1% share of the market is 310,000,000 kg with a typical wide-bodied freighter payload of 84 tonnes (reference WINGS July/August 2006 page 29) is 3,690 aircraft per year, 10.1 flights per day or five arrivals.)

As for the Atlantic Canada regional distribution role, Halifax also serves this market. Consolidated Freightways announced development of a new container de-stuffing processing centre in Dartmouth and the proposed inland port for the Halifax Region would be seeking to serve this market as well. Bringing marine containers to GMA, and then trucking back bananas to Sobey's in Halifax would appear to be the same inefficiency as marine containers travelling all the way to Central Canada gateways to be destuffed, then bananas trucked back to Superstores in the GMA as well as Halifax. GMA's advantage is in its central Maritimes location but Halifax is the usual point of arrival and the largest economic centre in Atlantic Canada. The issue of container cabotage makes the faster turnaround of foreign containers at Halifax an advantage. Doubtless, Halifax and GMA will continue to share the Atlantic Canada regional distribution market. Nevertheless, there will be selected opportunities for the GMA to enhance its growth and market share of Atlantic Canada distribution.

- **Transit of Marine Containers**

As congestion increases at U.S. east coast ports, and ship sizes increase (to be inefficient at shallower draft U.S. ports), more containerized trade will arrive by the alternative deep water ports located in Canada, mainly Halifax. Marine containers arriving at Halifax for continuing transport go by CN Rail to Central Canada and to CN networks in the Midwest U.S. As more containers are diverted to Halifax instead of the U.S. ports, many of these will prefer a more direct rail or road routing into New England. The potential advantage of GMA is that it is at the crossroads for these two routes.[4] Some shipments will not require a full container for either of the Central Canada, Midwest U.S. or northeast U.S. markets; dividing a container's load for onward shipment via Central Canada to the U.S. Midwest or directly to New England would be more efficient at the

[4] Routing traffic, arriving at the Port of Halifax destined for the US north east, via Moncton, Saint John and the NB Southern Railway could have advantages over rail routes through Toronto and Chicago.

crossroads; adding the import trade processing function at the same time further improves the economics of such a supply chain.

Becoming an inland port for North Atlantic trade is likely a mid term opportunity. But the GMA is preparing for it by forming the CEIP to develop the regional markets. This will position the CEIP for its share of the North Atlantic trade as the Atlantic Gateway is developed.

Comparative Costs

Lobsters are often shipped via Boston's seafood markets and brokers. Exhibit 2 presents comparative costs for current truck-air supply chains versus air from Moncton to European markets; this savings would also apply to Asian exports routed via European gateways.

The CEIP saving over Boston is 17% in transportation costs and is even greater for the New York gateway comparison. There would even be a 7% saving for a Boston broker to truck to an air service at Moncton.

Exhibit 2
Air Freight Cost Comparison
GMIA versus Boston and New York
(cost per tonne)[5]

Cost Component	Moncton	Boston	New York
NB Exports and Imports			
Airfreight Costs to/from Amsterdam	$1,150	$1,303	$1,373
Trucking Cost Moncton to/from Boston		$45	
Trucking Cost Moncton to/from New York			$63
Total Transportation Cost Comparison	$1,150	$1,349	$1,436
Potential CEIP cost advantage		**17 %**	**25 %**
US Exports and Imports			
Airfreight Costs to/from Amsterdam	$1,150	$1,303	$1,373
Trucking Cost Moncton to/from Boston	$45		
Trucking Cost Moncton to/from New York	$63		
Total Boston to/from Amsterdam	$1,195	$1,303	
Total New York to/from Amsterdam	$1,213		$1,373
Potential CEIP cost advantage		**7 %**	**13 %**

[5] Cost figures in Exhibits 6.2 and 6.3 are typical aircraft and truck operating costs per tonne of freight.

Canadian Mussels reported using truck-air via Montreal for their European and Asian exports. Exhibit 3 shows comparative costs per tonne via Moncton.

Exhibit 3
Transportation Costs for Mussel Exports
(cost per tonne)

Options	**Leg**	**Mode**	**km**	**Cost**
Current	to Montreal	Truck	1,142	$60
(via Montreal)	Montreal – Amsterdam	Air	5,488	$1,300
Total				**$1,360**
CEIP	to Moncton	Truck	165	$10
	Moncton – Amsterdam	Air	4,880	$1,150
Total				**$1,160**
Potential CEIP cost advantage				**17 %**

Again, the transportation cost saving is almost 17%, as well as the day saved in overall shipping that further reduces total distribution costs.

CONCLUSIONS

The Purpose of the Study was: "**to undertake a feasibility study for the development of an Inland Port"**. This study has found:

- The Greater Moncton Area does have a well established logistics industry, including the road, rail and air modes of transportation services, that serves as a basis for further development of the inland port proposition

- Atlantic Canada does provide an origin-destination market base of traffic on which initial development can be based

- The Greater Moncton Area is well positioned on the North Atlantic trade route to serve as an alternative North American gateway, coincidental with being an intermodal transfer point

- There is and will be increasing congestion at U.S. gateways, on both coasts, that will require alternative gateways such as Halifax and Saint John with Greater Moncton Area geographically positioned to play a major role in the Atlantic Gateway concept.

- Being positioned on, and participating in, the flow of international trade is as important to a community in the 21st century as being on the railway was in the 19th century.

The conclusion can then be drawn that it will be feasible, indeed it will be necessary, to develop the inland port proposition as an integral strategy for the Greater Moncton Area logistics industry and the additional economic development of southeast New Brunswick.