

Moving Forward on the Atlantic Gateway: Context and Further Key Questions

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Abstract

This paper begins by exploring the meaning of the word gateway, and the role of ‘gateways and corridors’ in the current global trading environment. It examines the integrated nature of today’s economic environment, to provide context for the discussion about the players and their interests—what they seek to gain from gateway development. It then steps back to look at the lessons identified in various research activities undertaken in the Atlantic Gateway Research Initiative, developing four questions for those seeking to participate in gateway development. In answering these four questions, the remainder of the paper proposes strategies for the various players to consider. The paper closes with reflections on the vision for the Gateway and the future research agenda that the current research has identified. The concept of Gateway support discussed here takes a much larger view of the Atlantic Gateway in the world trading environment, and sees roles for all players, including universities, in developing the economic opportunities presented by the Atlantic Gateway.

Keywords

governance, gateways, trade corridors, ports, economic development.

1.0 Introduction

In 2006, the Government of Canada announced a Gateways and Corridors Strategy to fund infrastructure improvements, recognizing the critical nature of the country's infrastructure deficit (Government of Canada, 2006a). Its initial investments occurred on the west coast in support of traffic growth and private sector investment on corridors beginning at the gateway ports of Vancouver and Prince Rupert. The \$591 million investment in British Columbia includes \$30 million towards a new container terminal at Prince Rupert, and a further C\$233.5 million promised for future investments to improve traffic over the west coast. In addition, the 2007 Budget committed C\$2.1 billion to gateways and corridors with a national gateway and trade corridor policy framework to 'guide' the investment decisions (Government of Canada, 2006b). As part of that budget, an allocation was made for the development of the 'Atlantic Gateway.'

Three initial studies (CPCS Transcom, 2006; McMillan, 2006; APEC, 2006) were completed, each with a particular perspective, to examine the opportunity for Atlantic Canada to enter a new era as a key gateway for North America's trade with Asia. Since that time, the vision has grown and been refined with subsequent studies examining the potential for inland terminals, air cargo, short sea shipping development, and so on.

In keeping with the strategy, the Government of Canada funded The Atlantic Gateway Research Initiative (AGRI). The AGRI supported seven research studies as the academic community's contribution to the thought process on how best to develop the Atlantic Gateway.¹ In these studies, the authors have looked for lessons that might provide some contribution to the decisions players will make in their plans for 'seizing any opportunities' presented by the Atlantic Gateway Initiative.

The purpose of this paper is to provide a thought-piece that ties together and builds on lessons identified for the Atlantic Gateway from these research projects. In particular, the paper aims to provide the context and questions that will inform the next steps for the primary stakeholders. The economic downturn has all players, but particularly governments, rethinking their strategies. Governments have incurred deficit budgets to provide stimulus funding, shipping lines have restructured route network, cargo interests have restructured supply chains² and ports have developed plans for dealing with the exceptional downturn in traffic. The process of strategic change is not yet complete and provides an opportunity to increase participation in the upturn that will eventually come. The time for action has arrived and we expect that this paper will provide guidance for decisions to develop the Atlantic Gateway. What this paper will not do is pick winners and losers among proposed infrastructure projects.

To understand what we mean by 'gateway,' it is useful to clarify the term. A gateway is about more than just ports; it is about the networks of supply chains and a region's role in making them successful. It may be any entry exit or entry point such as an air cargo hub or a border crossing. It is also about more than just freight. In fact, the Government of Canada in defining a gateway as "a multi-modal entry/exit point through which goods and international

¹ These studies are available on the Initiative's web site. See http://citt.management.dal.ca/Atlantic_Gateway/

² Although some reports have confused the meaning of supply chains and value chains, these are different entities. A supply chain is not a value chain. A supply chain is the physical distribution chain encompassing all transactions from the raw materials supplied through manufacturing/assembly to the point where the final consumer purchases the item. A value chain includes all activities conducted in the creation of value for consumers, and so a value chain will include many support activities not included in a supply chain, like human resource management for example.

passengers move beyond local, and even regional, markets” (Transport Canada, 2009: 5) extends the definition to passengers and the APEC (2006) report included energy and cruise access as well.

This paper begins with an examination of the current thinking about ports as part of a broader market. It calls for a paradigmatic shift in the way we think about the future of gateways, corridors and the role of ports to one that is less port-centric and more balanced in the roles to be played by market players, government and civil society. To shift perspective requires us to understand the context of decision-making, the pre-determined trends already in play and the critical uncertainties that the future holds. Next, the paper delves deeper into the motivations of the market players and the government institutions they relate to, and brings to attention the role of civil society. We then seek to review lessons identified in six other studies in this series before drawing conclusions about the range of directions Atlantic Canadians may take in moving forward the federal government’s Atlantic Gateway Initiative.

The paper argues that shipping is a highly competitive and dynamic global market and that the Atlantic Gateway is a relatively small hub in this network; its capacity to effect change in this global context is limited. With this in mind, the Atlantic Gateway stakeholders must first anticipate and adapt to changes quickly and, second, coordinate action among stakeholders more effectively in order to be successful. Public and private sectors and academe must leverage their strengths and in so doing work more effectively together on shared vision.

2.0 The Increasing Complexity of the Gateway System

We can think of the gateway system as a network of interconnected groups and individuals who participate in the flow of trade. Trade has always involved a broad array of activities but, in the past, there were fewer specialized functions and differentiated roles, and in the network, the port often played the central role. We will underline in this paper that the traditional ‘port-centric’ vision is no longer adequate for understanding gateway development.

Nothing was ever simple; this is a system of many elements. Ships are built, manned and maintained; goods are moved on and off vessels; all aspects of the process have to be financed; and governments play an important role. Typically they seek to enhance business and improve efficiency, but at times subsidize shipbuilding and maintenance, levy taxes on port business, impose tariffs or even embargo trade. In the network, the participants are connected and all, to a greater or lesser degree, have some influence on how the network functions and, therefore, ultimately on how much trade each node or link handles.

What is different today?

For one thing, relationships now extend around the globe. The network is also much larger, many more participants are involved and specialization in the production and delivery of traded goods has increased dramatically. Furthermore, concerns about the security of both the goods transported and the equipment used to do the transporting have added to the complexity of the trade network we see today.

The hinterland of ports has also changed. While some major ports, like New York City, continue their traditional role of being primarily destinations for the goods they receive, others have strengthened their role as nodes in extended supply chains, and goods transit these ports to destinations that may be several time zones away. Some, like the Port of Prince Rupert, are not destinations at all but exist only as a sea-land transfer node, where containers are shifted from ships to rail. A study by the Joint Transport Research Centre (2008) of the Organisation for

Economic Cooperation and Development on ports and hinterland competition concluded that in the restructuring of supply chains, the power of global cargo interests and global shipping lines had grown and ports had less market power in the resulting trading dynamic.

The role played by government has changed as well. On one hand, in the last two decades governments have become more engaged in new public management, with less involvement in day-to-day operations and more in setting the rules of engagement and protecting the public interest, along the lines proposed by Osborne and Gaebler (1992). On the other, driven by citizen concern, more governments from local to regional (state, provincial) to national are becoming involved in issues they previously did not feel were their jurisdiction to address; for example, the interests of citizens has influenced the development of port activity in Southern California (Giuliano and O'Brien, 2008).

This globally extended, highly specialized and interconnected community supports the creation of much greater wealth than in the past, but it is also more fragile.

While in the past the culture of the network was relatively homogeneous, that is participants often shared goals of improving efficiency, providing jobs and increasing the profitability of the port enterprise, in today's global trade network, important participants now may have quite different goals. Financiers who own equity in ports or shipping lines may be interested mainly in short-term profits (seeing the port essentially as a financial asset), while environmentalists may be willing to sacrifice port operations, for example, to reduce emissions or preserve water or air quality. Property developers may view the port as a prime location for residential construction, catering to aging baby-boomers who want to trade suburban houses for waterfront condos.

Another element of change is increasing choice. In this much larger network, participants typically have a wider range of choices as means to achieve their goals. For example, Asian manufacturers shipping to U.S. markets have access to different (and competing) routing options—from Manzanillo on Mexico's Pacific Coast (served by Kansas City Southern Mexico) to Prince Rupert Port on British Columbia's northern coast (served by CN) as well as Long Beach, Los Angeles, Oakland, Seattle and several smaller U.S. ports in between. U.S. east coast markets can also be directly served by lines via Panama or Suez Canals. While choice encourages competition, which should encourage greater efficiency, it also creates uncertainty as major players can change strategies, leaving former partners with excess capacity. Competition may also drive wasteful investment as ports, for example, compete by building unnecessary infrastructure.

Clearly not every manufacturer or retailer can influence these patterns, but some like Wal-Mart and Home Depot can, and others, working together like the Canadian Retail Shippers' Association, can also influence the direction of freight traffic flows. Similarly, shipping lines as they consolidate and restructure globally have more choice as to which ports they will use, and seek to encourage ports to compete for their trade. The result is an increasingly complex world in which the Atlantic Gateway will develop or become marginalized.

The limited port network of the 18th century has become a vast, extended one in the 21st. While we have traditionally looked at ports as the centre of a network, we must now visualize a port as a point or node in a much more complex network.

3.0 Context

We think of the context of these developments in two dimensions drawn from the literature of scenario analysis—'pre-determined trends' and 'critical uncertainties'.

3.1 Pre-determined Trends

Pre-determined trends are those forces that we can assume are likely to shape the emerging environment of the trade network because we can see them in the current environment. However, while the basic elements of the trends are visible, precisely how they will affect the future environment is not evident. They are the building blocks of the trade network as it develops over time. These pre-determined trends include:

3.1.1 Globalization and continued economic specialization

We assume that globalization and continued economic specialization are key pre-determined trends. Such globalization will continue to put pressure on ports and highways in North America and lead to calls for more and continued investment in infrastructure.

The shape of globalization may change in important ways. For example, the high water mark of the global extension of supply chains may already have been reached and we may soon see a reversion to production closer to markets, driven by the rising cost of freight transport due to higher fuel costs or the impact of new environmental regulations. On the other hand, it is likely that the globalization of financial markets will intensify, particularly as the BRIC (Brazil, Russia, India and China) and oil-producing nations continue to build up large dollar reserves. China's role as a source of foreign direct investment is very likely to transform patterns of global financial integration, and raise difficult political questions about foreign ownership and/or control of strategic economic assets.

3.1.2 Global energy policy will play a role

Global energy policy will also play a decisive role in new types of transport propulsion systems, in the incentives and policies developed by governments seeking change and by cargo interests in the choice of transport mode they use for their goods to be moved. This may lead to new trade patterns, for example, inventory may substitute for transport, shipments may become fewer but larger, locally-sourced or "near-sourced" supplies may gain a competitive advantage, all of which will exert some dampening on globalization trends. If North American firms relocate production closer to consumption, this will increase pressure on the land network, hastening the call for better short sea shipping policies, good news for ports.

3.1.3 Technology will also play a role

Technology will continue to be exploited opportunistically by business interests as a medium for policy implementation and information-gathering by government, and by citizens in the form of provoking change. However, the impact of technological change is uncertain. For example, we are approaching a transformational moment in ship construction. Since the watershed decision by American President Lines to build a vessel of post-Panamax size in 1989, there has been a herd-like movement towards building ever-larger ships that carry more containers. It is possible that this movement will shift toward other forms of shipping—smaller, faster, more fuel efficient and environmentally supportive, or perhaps the trend may be toward much larger ships shuttling between huge transport hubs located away from urban centres where containers are sorted and transferred in smaller vessels to ports of entry. The point is that rapid technological change is surely a given, but in directions that are yet to be visible.

3.2 Critical Uncertainties

Critical uncertainties—‘risks’—are those factors that cannot be anticipated but whose impact could be considerable. We see these as the most important:

3.2.1 Current and future market demand

Over the past 30 years, the structure of global trade has been remarkably consistent and stable in terms of the demand placed on liquid and dry bulk vessels. Trade has grown with the population and the consequent demand for food and raw materials. On the other hand, the demand for unitized transport, revolutionized by the development of container transport in the 1950s (Levinson, 2006), has grown dramatically faster than the growth in world trade due to the specialization of production and the development of global supply chains. In this period of significant economic and political uncertainty, how markets, and the companies within those markets, will respond is uncertain.

3.2.2 Environment, sustainability and climate change

Climate change will grow in importance for citizens and will be a flashpoint for change-seeking activities. The threat of climate change will drive political controversy and, almost certainly, policy change in many directions. How much change and in what direction is very uncertain at this point. We can imagine a fearful public that demands major changes in port operations (already a factor, for example, in port development in Long Beach–Los Angeles) or international agreements that would increase the costs of seaborne trade and air cargo. Furthermore, it remains unclear what, if any, agreements on carbon reduction strategies will be reached.

3.2.3 The role of governments

Governments will continue to examine their roles in response to economic, financial and political uncertainties. In the U.S. (and other industrial nations), we see a deepening polarization between those groups demanding more aggressive government intervention to moderate economic and social change and those that feel the weight of government in society and the economy is already excessive. The wide-spread consensus that markets always return to equilibrium has eroded and, for the foreseeable period, policy makers are left with no theoretical guiding star.

3.2.4 Security (including Internet and cyber-security)

A nuclear bomb exploded (or even discovered) in a container in any port in the world would produce immediate responses by every government. Indeed, any attack carried out (or discovered) in the U.S. may well lead to the immediate shut down of U.S. borders. Thus, security concerns spread well beyond bombs and physical attacks. Attacks on governmental and private Internet-communications connections could alter the way the port community works, creating major new risks and expenses. The same holds true of the air cargo business, as the air gateway must contemplate.

While these critical uncertainties represent possible threats for the Atlantic Gateway, they also present considerable opportunity. If, for example, factions of the US environmental movement become radicalized to the point of slowing trade through frequent protests, or if U.S. ports become targets of terrorist attacks, the Atlantic Gateway could increase the effort placed on its current positioning as a more stable and reliable alternative route. At the same time, any coordinated actions that that Atlantic region pursues that intrude on others’ market share are

likely to meet with counter-actions by these other regions. Again, the shipping market is fluid and competitive; the Atlantic response must be dynamic, and sensitive to the market reality and the uncertainty about what competitive responses will be forthcoming from companies operating in competing route-markets.

In short, risks present threats and opportunities. An Atlantic Gateway Strategy must plan for multiple futures; effective scenario planning can be a useful tool. Key stakeholders must examine carefully the assumptions upon which their operations are based, and be prepared to change operations and indeed exploit new opportunities in light of changing dynamics. By and large, the dynamics of this industry are determined beyond the reach of the Atlantic region; defending and anticipating the status quo, therefore, is potentially an unwise gamble.

4.0 The Players: Who Are They and What Do They Seek to Gain?

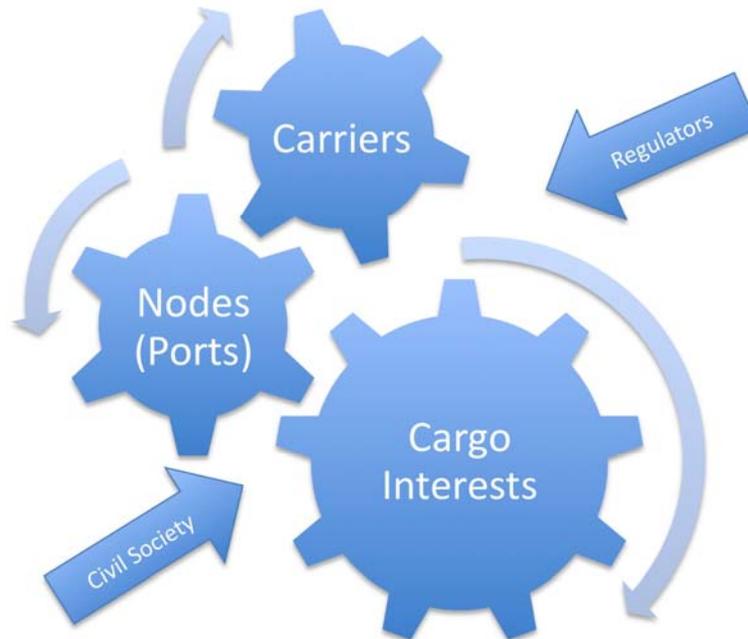
4.1 Who Are They?

There is a classic problem of terminology when players in the market are discussed. One frequent error is the confusion of value chains (as discussed by Porter, 1985) with supply chains. Porter disaggregates the value chain into components, some of which are supply chain activities. We can use the value chain approach to understand the reasons for outsourcing component part manufacturing or back office functions to other parts of the globe, but the fact of the matter is that value chain decisions are drivers of supply chain structure. Therefore that structure will be dynamic over time.

There is also a classic notation of the supply chain as being somewhat linear, from end to end, transferring goods from origin to destination via nodes where they may change mode or be transformed or resorted in the process. Such a notion works well in determining total logistics costs as seen in the work of Gunn (2009), or even when we wish to understand competitiveness from a Greenhouse Gas (GHG) perspective, as illustrated by Adams and Quinonez (2009). However, in the current decade we have seen supply chains grow ever more complex, like Japanese *keiretsu*, as more complex webs of relationships evolve, and companies like Maersk and NYK may not only own suppliers of some of their 'production' inputs, but also offer logistics services as agents working on behalf of their lines' customers! The complex web of possible relationships and partners has already been noted as a feature of the financial world but we have not yet heard of a call for firewalls in supply chain services markets. To deal with such complexity, we may categorize the players into a few groups of participants: Market Players, including Cargo Interests (owners of cargo and their agents), Carriers, Business Networks and Facilitators (including support industries); Government (all levels); and Stakeholders (NGOs, citizens, media, special interests). A simplified graphic of these is provided in Figure 1.

For the cargo interests (and their agents), the supply chain process is driven by trade and is all about trade. Numerous studies have shown that this group is much more interested in creating wealth through manufacturing and trading activities and, as the largest group of players, is represented as the largest cog in the supply chain machinery of Figure 1. Because it sees its interests as focused on its own sources of competitive advantage, be that chemical production, the manufacture of consumer staples, and so on, these players often outsource many supply chain activities to service providers including carriers.

Figure 1
The Players



Transportation, distribution and warehousing are service activities provided to meet the needs of cargo interests but form a second location of value creation. In Figure 1, these supply chain interests are represented by ‘carriers’ but perhaps only because it is the carriers (railways, shipping lines, and air cargo operators) that form the largest of the Fortune Global 500 service suppliers.³ The supply of warehousing, cross-docking, local trucking and so on tends to be a fragmented set of players, often local and nimble in meeting the needs of the larger firms.

A third set of players, separated in Figure 1, but still providing a service to the cargo interests are the ports. They have been separated here because they play a somewhat different role in the overall supply chain, and they often have government ownership if not management. They may encourage business networks to develop amongst broader groups of players or within groups.

Fourth are the facilitators and supporting business networks. They remain unlabeled in Figure 1 because their role is ‘to grease the wheels’ of activity between the other partners. This role is fulfilled by every type of player from the banks that provide credit (or not as has been witnessed lately) through to the shipyards and equipment suppliers to the information technology providers that provide coveted track and trace capability to the carriers and their customers as well as to the government regulators concerned about security.

The last two players are the Regulators (governments at all levels) and Civil Society (the stakeholders, media and citizens). They are illustrated in Figure 1 as being potential lubricants to

³ A quick review of the annual Global 500 issue of *Fortune* magazine each July finds the largest supply chain service providers to be companies like A.P. Moeller-Maersk, Nippon Yusen Kaisha, Deutsche Post (owner of DHL) and large air cargo companies like FedEx, UPS and Lufthansa. There are many more and much larger cargo interests to be contemplated in these webs.

the supply chain or as interfering sticks that may brake the movement of the supply chain. Both are possible outcomes.

4.2 What Do These Players Seek to Gain?

We have suggested that a critical difference between the port community of the past and today's port community is that in today's world, what participants hope to gain (that is, their 'interests' in the port) may differ substantially and may not necessarily focus on traditional goals of increasing freight business and improving port efficiency.

We can think in terms of four broad areas of interest:

Operational goals (and their efficiencies): By this, we mean traditional 'business' goals of enhancing profitability by improving operations, by making the system work more efficiently and seamlessly. Profit is derived from more efficient operations that enhance competitiveness.

Financial goals: The elements in the system can also be viewed as financial assets that can be bought or sold, or leveraged in many ways. These assets may be components of a broader portfolio. Profit may be derived primarily from trading or leveraging these assets, particularly in a shorter time perspective, rather than from long-term investment in efficiency-enhancing improvements.

Sustainability goals: Increasingly, sustainability goals influence how players view elements of the trading community. Goals are increasingly shaped by demands to improve the environmental impact of the total supply chain, and to do it in a safe and secure way.

Security goals: In the short term, protecting the integrity of the border, for example, can result in a decrease in a variety of undesirable activities, including, for instance, illegal trade and immigration, terrorism and the spread of communicable diseases. In the longer term, it can also be part of a strategy to claim ownership over disputed resources and geography.

The dynamics of the port community focus on the interconnected relationships among the various participants. It is no longer possible (if, in fact, it ever was) to assume that all players share the same interests. For example, what the Chinese government may plan to do in the foreseeable future to encourage more exports or how a major financial institution with a broad portfolio that includes equity in several ports (AIG, for example) will react to economic environment may powerfully influence the dynamic of supply chain relationships. Participants in the supply chain must maintain (or develop) more relationships in this environment, must anticipate possible developments and work harder to understand the interests (and, as we will see, strategies) of other players. Seizing opportunities is not about relationships with immediate suppliers and customers, but about relationships with customers' customers, suppliers' suppliers and with governments and other stakeholders.

There is no simple relationship between players and interests. Market players may at times be more interested in financial than operational goals. The interests of government agencies and citizen groups may be sharply divide between operational and sustainability goals, creating significant political and/or bureaucratic tension. Moreover, players may seek multiple goals (greater operational efficiency and greater sustainability, for example), which may be reinforcing

or conflicting. In looking at players and interests, it is important to ask key questions, such as who has the most leverage and who can bring about change.

5.0 Lessons Identified in the Research

The Atlantic Gateway Research Initiative (AGRI) funded seven research studies as the academic community's contribution to the thought process on how best to develop the Atlantic Gateway. These studies are available on the Initiative's web site. The seven studies arose out of a Summer Institute at Dalhousie University in August of 2008. In reviewing these studies, the authors have looked for lessons that might provide some contribution to the decisions players will make in their plans for 'seizing any opportunities' presented by the Atlantic Gateway Initiative.

5.1 Lesson 1: There May Be New Trade Opportunities but They Need Proactive Effort to Achieve Positive Results

Whether it is trying to understand whether there is the potential for increased total trade through the region, as examined in the South America–Ontario trade gravity study (Cyrus, 2009), or more volume possible over existing routings, as may be the case for building an inland terminal at Detroit (Belzer and Howlett, 2009), such development opportunities do not unfold without hard work. To realize more gateway activity, Belzer and Howlett (2009) only indicates a promise from a Halifax–Michigan link, not a reality. To exploit the opportunity, players seeking to participate in the potential still need to identify partners in the supply chain that will invest resources—personnel, time or funding—so that the business case can be explored, the coalitions built, and the determination made about whether the logistics costs on the routing will be favourable. These two projects also reflected that there is a role for supportive university research.

5.2 Lesson 2: Logistics Cost Considerations Are Important to the Reshaping of Global Supply Chains

The costs associated with using a particular supply path include much more than the simple costs of transporting the material, such as the costs of carrying the inventory (replenishment inventory itself or that in the pipeline) and the safety stock that must be maintained to buffer against variability in demand and time of replenishment. Other costs include costs of shortages due to inability to supply and cost of excess stock due to market changes during the replenishment interval. Gunn (2009) developed a flexible and readily usable model of the logistics times and costs for alternative routes through the Atlantic Gateway, one that can be used by three types of market players—(1) private sector companies to compare routings in terms of time, costs and time variability and with an extension (Adams and Quinonez, 2009) also GHG emissions, (2) some use by public policy analysts although it would be limited by access to data, and (3) business development analysts to identify marketing opportunities. From a supply chain restructuring perspective, the development of this model would enable individual cargo interests to explore an Atlantic Gateway option as part of their overall supply chain restructuring, including GHG emissions and business development analysts to market the Atlantic Gateway internationally. In the broader context, it also enables governments to use the model to understand other factors, such as GHG impacts, the resiliency cost of a network from a critical infrastructure protection perspective, and the knowledge infrastructure necessary to support various gateways and corridors.

5.3 Lesson 3: GHG Impacts Are Also Relevant to the Development of New Supply Chains

From a GHG perspective, ships produce less carbon than airplanes; rail has less environmental impact than trucking; larger ships are more GHG-efficient so trunk routes are more GHG-efficient than feeder routes. Congestion is a key factor; crowded ports with older drayage vehicles generate a lot of emissions and long wait times at border crossings can generate significant GHG emissions. GHG mitigation strategies will have a significant impact on shipper strategies. If minimizing GHG emissions becomes linked with a port's 'social license'⁴ to operate, then embracing GHG reduction strategies earlier on could position a port in a competitive light, particularly if its competitors have failed to respond to these signals and experience higher carbon taxes, operational disruption due to non-compliance, or stakeholder interference (Adams and Quinonez, 2009; Adams *et al.*, 2009). Retail giants like Wal-Mart and Tesco have spoken out in favour of more sustainable supply chains, pushing shippers to be more concerned about transportation impacts. What began with a decision to invest in more sustainable products will likely evolve into close examination of the environmental impact of how goods are moved to market. A public policy focused on more GHG-efficient transportation benefits civil society, and may be the driving force towards 'low-carbon' transportation. For example, if European countries impose a carbon tax on all imported goods transported by air and based on the distance traveled from the airport of loading, then this could significantly improve the volumes at air cargo hubs in Atlantic Canada; similarly, carbon taxes on road or rail options could affect routing dynamics and advantage those ports closer to the final market.

5.4 Lesson 4: Environmental Practices of Ports May Also Be Relevant Over the Long Term

A key research question for a forward-looking Gateway implementation is: What is the role of environmental performance in port competitiveness? Is it justified for port operators and port authorities to invest in improving environmental performance beyond compliance? Is there a business case to be made for environmental enhancements? A business may invest in improving its environmental performance for three potential reasons: 1) competitive advantage, 2) social licence to operate, and/or 3) corporate conscience. Between 2002 and 2007, major ports were experiencing double-digit volume increases, which resulted in problems with surrounding communities, including increasing congestion, noxious air emissions and safety concerns. Some port projects were halted by local community intervention. The downturn in global trade has diminished some of these pressures and, for the moment, ports are able to continue planning and expansion programs. However, all indications are that world trade will rebound, and we could see a doubling of cargo volumes by 2040, with the resulting community concerns and political problems re-emerging as well. Therefore, it is likely that ports will have to devote more attention to winning community support for their activities. Positive environmental performance may not be seen as a competitive advantage, but not having proactive environmental policies in place could very well be a competitive disadvantage.

5.5 Lesson 5: Funding Transportation Infrastructure May Result in Rebuilding Manufacturing in a Region

The Canadian government's gateway vision has at its core a considerable investment in infrastructure. There is no doubt that the next question then becomes: "investment in what?" In

⁴ Social license is the support of civil society.

other words, which infrastructure projects should be supported and why? In addition to the usual bridges, highways and border crossing investments are other ones to support inland or air cargo terminals, facilitate supply chain restructuring, and so on. The Belzer and Howlett (2009) working paper confirms that there is an infrastructure funding role in seizing gateway opportunities, and that the investment may result in rebuilding the manufacturing sector in a location.

5.6 Lesson 6: Gateway Development Requires a Player to Become a Concept Champion

More important, and specific to the Michigan case (Belzer and Howlett, 2009), there are governance considerations in executing gateway development plans. In the Michigan case, there is a need to re-establish the role of the State in governance, setting priorities and acting to represent all the citizens of the State. Only the State has the authority to act on behalf of state-wide interests. This means not abdicating governance to the private sector but ensuring that the State takes on a role of ensuring that parochial interests (of cities, counties, and others) do not overwhelm overall regional economic development interests. Therefore, infrastructure development priorities should result from the definition of the State's needs, and governance should not be haphazard and conditional on local interests. In the U.S., the funding issue and the roles of various levels of government as well as users have been recently explored (Transportation Research Board, 2009), while in Canada, there has been leadership on the three gateways through budget allocation, but the problem remains of ensuring that players do not wait for someone else to step in first to lead. The federal government has indicated that the private sector needs to come to the table, but without adequate data for opportunity analysis this is sometimes a difficult position. Universities see opportunities but are seldom in a position to lead pre-business case development work. The Canadian situation can, therefore, devolve to all players waiting to see who takes the proactive role of leading a particular initiative.

5.7 Lesson 7: Atlantic Canada Must Cooperate and Coordinate More Effectively to Survive and Grow in this New Context

Brooks *et al.* (2009) argue that the collective aim in the Atlantic Canada region, in the first instance, should be for players, including stakeholders, to cooperate and coordinate more effectively with an eye to increasing the Atlantic region's share of the overall market. The authors examine formal and informal marketing and business practices, operations, administration and regulation in ports in Atlantic Canada and conclude that the region's ports do not cooperate or coordinate as effectively along these lines as those in northern European countries do. The paper cites the passenger levels resulting from the activities of the Atlantic Canada Cruise Association, and new business arising from the outgoing and incoming missions (India and Vietnam) to build trade as evidence of the potential gains from increased cooperation in the region.

In other words, all stakeholders, not just the ports of Atlantic Canada, must share a vision, agree on the rules, and realize that competition for the market must occur before competition in the market can happen. The key is building the pie to be bigger; coordination along the supply chain is important to gateway development as supply chains compete and so this provides a common beginning point for all players, not just ports.

6.0 Key Questions

While these seven lessons are identified in the research, they are not all that may be gleaned from the studies. They do, however, lead us to four key questions that must be answered as part of the execution of any gateway development program.

1. What is the value proposition? Where are the opportunities?
2. What ‘plays’ are possible? Are they suited to the Atlantic Gateway context?
3. What government tools can facilitate Atlantic Gateway development?
4. What is the Atlantic Gateway vision for 2020 and how do we get there?

6.1 Question 1: What is the Value Proposition? Where are the Opportunities?

While Levinson’s (2006) example of Mattel’s 1950s decision to establish operations in China, Taiwan and Japan to build that most American invention for baby boomers—the Barbie doll—illustrates the early days of the third wave of globalization⁵, it has become clearer over the past half century that cheap labour has played an ever-greater role in the restructuring of global supply chains. Throughout the first part of this decade, route competition was crucial for shipping lines and ports competed on time-based competition. However, by late 2008, the economic recession meant competition was more focused on price than on service. In Atlantic Canada, we have the critical infrastructure to exploit a time-based market (Brooks, 2007a; APEC, 2006). In logistics cost models, time provides a financial value arising from a reduction in transit time and associated inventory carrying costs. There may also be a value proposition arising from minimizing GHG emissions but that is a longer-term prospect. The value proposition of the Atlantic Gateway, however, must be identified for each of the players, and communicated to them. If a supply chain manager does not know about Atlantic Gateway options, there is a communication gap deterring the use of the route. As noted by APEC (2006), attracting one big volume shipping line that would turn a discretionary port like Halifax into a hub port is an opportunity. As is clear from the illustration of Savannah in the 1990s, attracting one big box retailer to set up a distribution centre may bring others. The opportunities arise not only from using existing infrastructure to advantage, but also from identifying new options. The examples of plays below illustrate how other locations have seen a value proposition and then taken advantage of it to exploit the opportunities available to them.

6.2 Question 2: What Plays That Are Possible (and Are They Suited to the Atlantic Gateway Context?)

6.2.1 Play No.1: Infrastructure Investment

Example A - The Heartland Corridor Project: The Heartland Corridor is a set of rail and intermodal improvements under construction between Portsmouth, Virginia, and Columbus,

⁵ There are many debates over whether globalization has recently experienced its first, second or third wave. This choice of ‘third wave’ concludes that the exploitation of the Silk Road to China was the first. The second was occasioned by the advent of the steam engine and its variants, leading to the ability of manufacturing to specialize and exploit economies of scale and sell to the world given reliable transport. The ‘third wave’ of further deconstruction of the value chain of manufacturing and transport companies enabled even further specialization coordinated via telecommunications made cheaper by deregulation, the development of the Internet, and transport innovation and deregulation further reducing transport costs to a fraction of former levels.

Ohio. Its purpose is to open a new double-stack container route between the Port of Virginia and the U.S. Midwest. The project includes numerous smaller projects such as the relocation of a rail line in Portsmouth to eliminate highway grade-level crossings thereby increasing the line's capacity; tunnel clearance modifications to allow double-stack container trains to service the currently single-stack Norfolk Southern line; and the construction of three inland intermodal terminals along the route in Virginia, West Virginia and Ohio.

The Transportation Research Board examined this project (Transportation Research Board, 2009), as one of eight case studies, to explore the beneficiaries (players and stakeholders) and the funding sources (public versus private) in order to understand what did and did not work in the complex world of funding freight infrastructure with both public and private beneficiaries. For the private sector railroad, the potential benefits include lower costs and the ability to carry greater volumes of container traffic from the terminals in Virginia Ports to the U.S. Midwest (the project leadership came from the Norfolk Southern). The private developer of the new Craney Island container terminal at the port will also benefit. For the public sector, the expected benefits in Virginia are the elimination of passenger–freight conflicts in the Portsmouth urban region (desired by the local citizens), highway cost savings from diversion of traffic to rail (desired by the Commonwealth of Virginia), and an improvement in the competitiveness of the port in comparison with other East Coast ports. For others along the route there were benefits arising from diversion of traffic to rail and economic development via the intermodal facilities.

From an Atlantic Gateway perspective, the Heartland Corridor inspires both admiration and trepidation. The admiration is recognition of the way the project became a public:private arrangement, and a win:win project for all parties; it was “the first time that the private freight rail industry has worked together with U.S. DOT . . . to develop and finance a rail improvement project” (Federal Highway Administration, 2006). The trepidation arises from three facts: (1) by removing 200 route miles, and their accompanying hours of transit time (back to time-based competition) from a Norfolk-inclusive supply chain, the Port of Norfolk has improved its ability to take business from east coast Canadian ports serving the U.S. Mid-west; (2) by taking the single-stack service to a double-stack one, the rail operator will realize the cost benefits experienced by CN's opening of the St. Clair Tunnel in 1995, and (3) the development of three intermodal terminals en route to Chicago enables those communities to grow their transload business and provide better service to their local regions in the inevitable restructuring of supply chains (another play to be discussed shortly).

Example B - The Prince Rupert (Fairview Container Terminal and CN Corridor) Project: The Asia–Pacific Gateway and Corridor Initiative (Government of Canada, 2006a) committed \$591 million for investment in British Columbia, including a commitment of \$30 million to the new container terminal at Prince Rupert. Again the project was a private:public sector and win:win option. It provided an alternative routing to the private sector (mostly retailers) in Chicago bringing in goods from Asia with a much shorter transit time from Shanghai, Busan and other north Asian ports, and additional business for the private sector CN line through Northern BC. The potential for economic development spin-offs may not reside in Prince Rupert, as the terminal is designed as a ship-to-rail facility and the population is small (72,000). However, there is potential along the route, particularly where it passes near larger centres like Edmonton, Winnipeg and Minneapolis-Saint Paul. Furthermore, when coupled with the acquisition of the Elgin, Joliet and Eastern Railway Company (EJ&E), the potential for ‘beyond markets’ is improved. While the volume of traffic over the Fairview Terminal has not grown as quickly as

anticipated, and the second phase with its additional 1.5 million TEU capacity has not yet begun, the promise of the routing for time-based competition remains in the future after economic recovery and when Americans return to shopping as the national pastime.

Example C -: Infrastructure Investment in Kansas City: Served by eight of the thirteen Class I railroads, Kansas City is the second busiest rail hub in the U.S. (after Chicago). As one of only five U.S. cities in which three interstate highways intersect, the region is at the heart of both north-south and east-west trade corridors, and is the third largest trucking centre in the nation.

A strong network of organizational and institutional assets supports Kansas City's remarkable physical infrastructure. The region's leadership has sought to develop strategies to improve the attractiveness of the region as a transit and processing point for trade and commodities between the Atlantic and Pacific coasts and between the United States, Canada and Mexico. One of these supporting institutions is Kansas City SmartPort, a not-for-profit corporation composed of railroad carriers, trucking companies, logistics companies and service providers whose objective is to increase trade volume flowing through Kansas City and to improve the management of these trade flows. SmartPort has cooperated closely in building the new International Freight Gateway at Richards-Gebaur and has helped make Kansas City one of the country's most effective inland ports. Kansas City's International Affairs and Trade Office, and its Mexico Business Development Program, is another vital component of this system; this office and an array of partners have created a key program to encourage and support the development of new business with Mexico. Kansas City's Mexiplex houses the Kansas City-Mexico trade promotion office, the Mexican Consulate General, the Hispanic Chamber of Commerce and the trade promotion offices of the cities of Monterrey and Guadalajara, giving the city a unique image in Mexico and throughout Latin America. Kansas City has also developed deep ties with Winnipeg, the northern end of the mid-continent corridor.

However, Kansas City may not be faring as well as expected, however, in its efforts to become North America's logistics centre. It is possible that the region's remarkable physical assets have detracted local leaders from developing a clearer business strategy. The region remains more of a logistics hub (although this has created business interests and jobs), but it has not yet developed the transformative, value-added activities it might.

6.2.2 Play No 2: Restructuring the Supply Chain

To quote the Atlantic Gateway Business Case research by Intervistas *et al.* (2007: 48-49):

The Port of Savannah has branded itself 'America's Retail Port', with 19 on-site import distribution centres and another 70 within five hours. A combination of distribution centres, ready access to two interstate highways, 100 plus trucking companies, two Class 1 railroads and a workforce trained in logistics have attracted shipping business from companies such as Bass Pro Shops, Best Buy, Hugo Boss, IKEA, Kmart/Sears, Lowe's, Pier 1 Imports, Target, Home Depot and Wal-Mart.

The Georgia Port Authority has embarked on an aggressive expansion program at Savannah, which will see that port double its capacity in 10 years. Capacity will reach 6 million TEUs by 2020. It is also completing a fifth track at its intermodal container transfer facility (ICTF), which will boost capacity by 25%.

The port is also establishing the South Atlantic Chassis Pool, which will free up inland and port terminal capacity at Savannah and Charleston.

Savannah embarked on a vision of building its future around the restructuring of supply chains in the 1990s as globalization's impact on supply chains took off. Although it handled fewer boxes than Halifax and had a shallower port (Intervistas, 2007), it was blessed with a vision and saw an opportunity to build distribution centres to service a population base within 200 miles, and partnering with others within concentric circles of 500 miles and 850 miles of the port (Harrison, 2008). That vision has been realized, and in 2007, Georgia Ports (including Savannah) ranked 41st in the world and handled 2.6 million TEUs.

More recently, Canadian Tire has followed a similar line of thinking. In examining its supply chain for incoming goods from Asia, the company noted the cost of the chain was inflated by the existence of a large volume of empty boxes outbound (Sinnott, 2007). By restructuring its routing decisions, the company was effective in removing empty boxes and diversifying its route risk; Halifax, Consolidated FastFrate and the Port of Halifax were the prime beneficiaries, bringing additional employment to Atlantic Canada.

The third illustration is taken from August 2008's Summer Institute held at Dalhousie University. Rob Harrison, Deputy Director of the Center for Transportation Research at the University of Texas at Austin, talked about the development of Alliance, the inland terminal and value-added freight hub (including an air field and a BNSF rail line), in Dallas–Fort Worth to service the Port of Houston's customers (Harrison, 2008). Perhaps most striking was that the Alliance team focused on discovering opportunities by identifying cargo interests' problems and trying to provide a solution. Over time, this included the building of light manufacturing and support industries as the economy of the region grew. In other words, the Alliance example shows that a supply chain solution may actually lead to cargo generation developments.

6.2.3 Play No. 3: Cluster Development, Coalition Building

The geographical agglomeration of interconnected businesses, or business clusters, is considered a viable means of growing communities and increasing competitiveness of individual businesses. Michael Porter (1990) popularized the concept of business clusters as a means of improving competitiveness, and the examples often used include the design and fashion industries of Milan, Silicon Valley for information technology, and the supply chain and maritime cluster of Rotterdam. Clusters also occur in vertical arrangements, optimizing supply chains. The examples of Savannah and Dallas–Fort Worth noted above are worth considering in this light. Mississauga, Ontario, is a well-known supply chain cluster in Canada, just as the Detroit–Windsor area boasts an automotive cluster reputation. Porter argued that clusters not only increase the competitiveness of businesses, but also drive innovation and development of new businesses. Atlantic Canada's current clusters are food (seafood, blueberries, french fries) production and education, plus others to be filled in by you, the reader.

Positive experiences to date illustrate the power of coalition building. In the case of Halifax–Detroit, the collaboration of Wayne State University with the region through the Atlantic Gateway Research Initiative is one example (Belzer and Howlett, 2009). A second is the Halifax–Cleveland short sea investigation being conducted by Dalhousie University business students as part of their course work. Third is the establishment of in-market representation, such as the Atlantic Gateway Business development office in Hanoi and the Port of Halifax partnerships with Tata in India and their representative in New Jersey. Fourth is the Dalhousie

Department of Economics analysis of the Brazil–Ontario corridor from a trade gravity model perspective (Cyrus, 2009); would the Port of Saint John be a beneficiary of this study? Just as Vancouver used expertise resident at the University of British Columbia in building its International Maritime Centre in the late 1980s and its intelligent gateway under the Asia–Pacific Initiative, so can the Atlantic Gateway use the expertise of Atlantic Canadian universities to build pre-business cases.

How do we build on these clusters to grow the Atlantic Gateway? If we take this broader perspective, the education cluster can be harnessed to assist in new product development that is globally competitive, explore new markets for local companies and generate relationships with the future business, political and cultural leaders of the target markets. To date, not enough use has been made of the cluster potential of Atlantic Canada.

6.2.4 Play No 4: Exercising the Tools of Government

As one of the players, government has many tools it can exercise to achieve desired outcomes. What are these? As this was our third question, this play is addressed next.

6.3 Question 3: What Government Tools Can Facilitate Gateway Development?

Hood and Margetts (2007) describe what governments can do with the four basic resources they possess: nodality, authority, treasure and organization. This section describes in more detail these four resources and considers the constraints and opportunities that governments face in furthering the development of the Atlantic Gateway. Note that these categorizations of resources can at times overlap and, indeed, the discussion on organization in particular will pull together elements of the other three resources.

Nodality denotes the property of being in the middle of an information or social network. A node is a junction of information channels. Governments are typically nodal in different ways. They may constitute a central presence in the form of a ‘figurehead.’ They may also constitute a central presence in a more narrowly defined sense—seeing many different cases and thus building up a store of information not available to others. Nodality gives government the ability to traffic in information. The limiting factor is credibility (Hood and Margetts 2007: 6).

Government’s capacity to act as an effective figurehead in the Atlantic Gateway faces many constraints. First, maritime shipping is international—it includes numerous players from many different countries and nodes abound. The Canadian gateways generally, and the Atlantic Gateway in particular, are small players on this stage. The under-used capacity in the Atlantic Gateway creates a buyer’s market and further tips the influence away from domestic governments.

The ‘big picture’ can also be elusive. The multiplicity of players—financial services, logistical firms, service supplies, equipment suppliers, NGOs and other special interests—makes understanding the dynamics of the system difficult if not impossible. While the government may at times have a broad perspective, a full and exhaustive understanding is likely beyond reach.

However, government can still play an important role as an information resource for the Atlantic Gateway. While it may be limited in its ability to be a ‘figurehead’ on the international stage, locally its size and influence can make it, by some margin, an important player in the mix. Moreover, the government has the capacity to enrich the local information pool, for instance by supporting research for which there is no immediate commercial value but which will assist with longer term positioning of the Atlantic Gateway Initiative; examples are the impact of low-

carbon routing and different fiscal policies, the potential for new markets and the identification of potential weaknesses in the supply chain.

In this sense, the government can combine both elements of nodality—the role of figurehead and the holder of information—to facilitate a strategy process for the Atlantic Gateway initiative.

Authority denotes the possession of legal or official power. That is, the power officially to demand, forbid, guarantee and adjudicate. Authority in this sense is traditionally seen as one of the defining properties of government, though its sources, base and level may vary widely. Authority gives government the ability to ‘determine’ in a legal or official sense (Hood and Margetts 2007: 5 and 6).

Government authority with respect to the Atlantic Gateway is (paradoxically) far-reaching and quite limited. The government’s legislative responsibilities are vast and growing, reaching into, for instance, transportation, security, taxation, border and the environment. The government has an active policy agenda in all of these areas. As a large stakeholder in the port, for instance, it also has the rights, privileges and responsibilities of ownership as determined by the *Canada Marine Act*.

Still, government’s authority can also be truncated. At a minimum, the highly competitive nature of the industry prevents government from over-regulating lest it put Canadian domestic shipping at a competitive disadvantage. Many legislative and policy initiatives in maritime shipping, such as security and environmental concerns, are arguably motivated not by domestic pressures but by international ones. It is debatable, therefore, that the Canadian government, as a relatively small player globally, has much flexibility within these international parameters. Moreover, within the national boundaries, lines of government responsibility are not always clear. While the federal government has authority over ports, the provinces or municipalities have responsibility for several key aspects of national infrastructure that relate directly to successful management of ports, such as roads, drinking water, policing, and so on. At best, this complexity leads to cooperation and coordination between government agencies; at worst, it leads to confusion, blame-shifting, stalemates and turf wars.

Finally, political instability also constrains the role of government. Minority governments are known for pursuing multiple projects simultaneously; they are also known for their limited ability to act decisively. In this context, bold legislative initiatives are unlikely in the near future. This is not to comment on the current Parliament, in particular, but rather to note that the last three elections have resulted in minority governments, and there is reason to believe this may be the beginning of a trend. In this case, in addition to the need for coalition building across four Atlantic Provinces, coalitions would have to form across party lines for such initiatives to gain any legislative momentum.

Government interventions typically involve a shift in resources from one group to another. Whether these costs and benefits are concentrated on specific stakeholders or dispersed among many depends on numerous factors, including the preferred policy position of the government and the power of the individual groups involved in the regulation, both for and against (Wilson, 1980). Despite these organizational challenges noted above, there are important and arguably appropriate uses of government intervention in the development of the Atlantic Gateway initiative.

Government may wish to address certain market failures. Despite the increased profile they presently enjoy, security and environmental concerns are typically victims of ‘the tragedy of the commons’—a situation in which individuals acting independently, in a self-interested manner

and without regulation, deplete a shared resource, which leaves everyone worse off (Hardin, 1968). It is certainly plausible, if not likely, that private companies working in a competitive market will put their survival ahead of longer-term environmental or security concerns. In order to address the potential for this market failure, government will have to stand at the ready to exert its authority to maintain and enforce appropriate standards.

Government's use of power and authority may also be subtle. It will potentially have considerable influence locally in setting agendas (Kingdon, 1995) and appointing members to any formal governance committees. These governance committees will address important questions: Which Gateway challenges will be addressed first? Which region's requests will be addressed? Who constitutes viable stakeholders for consultation in the process? What is the appropriate balance between private sector and NGO/civil society in the consultation process? What is the appropriate balance between domestic and foreign ownership? How will these projects be funded? Who will be held accountable for public funds? The list goes on. The answers to these questions may not always be shaped by formal government intervention, but government's capacity to influence the answers can be formidable.

Treasure denotes the possession of a stock of moneys or fungible chattels. That means not only (or necessarily) money in the common, everyday sense of banknotes or coins, but anything that has the money-like quality of fungibility—that is, the capacity to be freely exchanged. Treasure gives the government the ability to exchange; it may use it to influence people or buy information (Hood and Margetts, 2007: 6).

Government could use its financial resources to address the previously noted, and growing, fragility of supply chains. As organizational interdependence can mean that a failure in one part of the supply chain can bring down the entire supply chain, government can make strategic investments to ensure critical infrastructure in the region is sufficiently resilient that single points of failure will not have a cascading effect, thereby shutting down the entire supply chain.

Government could also initiate an arm's-length and independent development bank for the Atlantic Gateway. The development bank could, for instance, establish a central fund that would make investments and facilitate a coordinated strategy across the Atlantic region. It can opt for more flexible use of zoning practices with Crown land, which could help ensure the efficient transportation of goods through the Gateway; it can ensure rail and roadways have more efficient access to Detroit, Cleveland or other potential hubs and trade routes, for instance. It can also pay to promote the Gateway among key shippers; and it can create financial incentives to entice more traffic to the Gateway. Equally, it could move in the opposite direction—impeding Gateway growth.

Organization denotes the access to a stock of people with whatever skills they may have, land buildings, materials, computers and equipment. Organization gives government the ability to act directly; the limiting factor is capacity (Hood and Margetts 2007: 6).

At present, as noted in the Brooks *et al.* (2009) working paper, there are various institutional arrangements that ports of the Gateway belong to: the North Atlantic Ports Association, the Independent Marine Ports Association of Canada, and the Association of Canadian Port Authorities. These organizations are a mix of public and private interests and none is focused exclusively on developing Gateway ports per se. As well, there are various government agencies that have specific policy interests and responsibilities, including gateway development. In many respects these myriad arrangements present an opportunity for useful government intervention. It may also allow government to use its other three resources (nodality,

authority and treasure) to better effect. If, for instance, government could create one oversight body that brings all interested parties together, the oversight body could more effectively become a ‘figurehead’ and a more complete repository of information on the Gateway. In other words, it would become a more powerful node. The consolidation of various actors and processes would not only make the governance arrangement more efficient in terms of reducing cost, which would satisfy the treasury component, but also it could result in a more coherent approach to the Gateway project generally. The various and competing views with different responsibilities could negotiate their different positions and reach consensus more quickly.

What is perhaps less clear is the impact such a body would have on government’s authority. Opening up a collaborative process between multiple stakeholders requires government, if the process is to be taken seriously, to relinquish some authority to stakeholders. This creates challenges, of course. Committees, which ostensibly strive to be egalitarian, are useful for generating ideas and input but decidedly less successful at making decisions. They are susceptible to splits or breakdowns in organizations as individual interests strive to define themselves (Hood, 1998).

Policy decisions shift resources from one group to another and often these trade-offs have been between different economic interests. The rise of environmental concerns among members of civil society, however, will mean that these trade-offs will also have to include social and environmental factors, taking into account, for instance, the needs of future generations, making consensus even more difficult to achieve.

While networks and nodes tend to dominate Atlantic Canadian thinking when it comes to most policy discussions today, the region is sufficiently small that it may be able to generate a context that permits a level of corporatism, which favours negotiations with smaller but more powerful players who can speak on behalf of many interests (Schmitter, 1979).

There are two important caveats to the use of government tools. First, one body should not attempt to promote *and* regulate the Gateway; the resulting conflict of interest would unlikely result in neither task being performed particularly well. By sitting at a round table as a partner, government potentially compromises its capacity to play the role of enforcer. Second, corporatism can be less transparent, and can therefore result in (loud) disagreement from ‘outsiders.’ If important policy and management decisions are not seen to be fair and transparent, stakeholders will object and the enterprise will not move forward. The key is to have the right representatives at the table—those with ample support from the relevant social and economic stakeholders—and a shared vision, which can be articulated through a strategy process.

6.4 Question 4: A Vision for Atlantic Canada in 2020 and How Do We Get There?

The current vision of the Government of Canada (Transport Canada, 2009) for the Atlantic Gateway is broad and much improved over the articulated vision of 2006 (Bohunicky, 2007), which specified a lump sum of unallocated marketing money but did not yet see any infrastructure funding, and was based on a backwards look at existing volumes and values. That noted, there is still some way to go to improve on the current vision. While the details of its execution are still in development, the Government’s vision of Atlantic Canada’s capabilities as a gateway:

- Has not developed an implementation timeline that is short, intermediate and long-term in execution. The Atlantic Gateway has three components of critical importance: the long-term potential of the trans-Siberian Asia–North America route, the medium-term

potential of the South American market (that needs to be defined better), and the immediate potential of the South Asian market where Atlantic Canada has a time-based competitive advantage. This advantage is likely to grow more quickly when transit time regains its competitive advantage after the current economic downturn has been weathered, and (or) when transport fuel costs rise as a result of rising oil costs at source or the incorporation of GHG costs into transport fuel prices globally.

- Has not helped to position the region to exploit the rapidly emerging Brazilian economy. Transit time-based competition indicates that any of Saint John, Halifax, Sydney or Melford could provide faster access to the population at the centre of the continent than either Houston or Savannah if the ocean leg is coupled with a seamless land network.

Furthermore, Transport Canada (2009) notes Canadian Tire's efforts at supply chain balancing has led to additional flows over Halifax, indicating that it is not just about infrastructure but also about the encouragement of the tools needed for supply chain restructuring. An integrated approach to an Atlantic Gateway could significantly enhance Canada's ability to capture a larger share of growing trade flows between North America and foreign markets.⁶ We couldn't agree more.

A port-centric view of the Atlantic Gateway seems to focus thinking on the port infrastructure investment play as 'the silver bullet.' Such a narrow view restricts the necessary broader thinking we've described above. A larger supply chain vision encourages the broader thinking already noted above. Once goods get to the shores of North America, where do they go? What else is needed to enhance the Canadian gateways on the east coast of North America? At the Vancouver Gateway conference, Brooks (2007b) identified three impediments to gateway development on the east coast: (1) port governance and the financing of port infrastructure, (2) regulatory barriers and (3) administrative procedures that influence gateway and corridor effectiveness in global supply chains serving North America. These were developed in greater detail in subsequent research published by the Conference Board of Canada (Brooks, 2007a). While the first has been addressed satisfactorily,⁷ the other two remain problematic for developing inland corridors to the U.S. In addition, the impediments to developing short sea shipping on the coast were identified in 2003, but there has been little progress on this front. All of these are within the range of government tools (Play Number 4) that can be brought to bear as the government's contribution to executing on its Gateway vision.

*In an increasingly connected world, the key will be an integrated approach to physical and policy infrastructure.*⁸

While the earlier documents on gateways and corridors seemed to be heavily weighted towards infrastructure investment, the 2009 Framework has expanded the notion to more explicitly recognize 'policy' infrastructure. Policy infrastructure is not the low-hanging fruit; it requires hard work to get alignment of interests and legislative change.

⁶ Transport Canada (2009), p. 14.

⁷ Since passage of amendments to the Canada Marine Act in June 2008 (Bill C-23), ports have been able to access Build Canada funds for port improvements.

⁸ Transport Canada (2009), p. 3.

One coordinated, oversight body for the Gateway can be a central pillar in this policy infrastructure. A united governance structure for the region can be the repository of information and research; it can also lead to the development of a longer term Atlantic Gateway strategy. While the provincial governments of the Atlantic region are to be lauded for having developed a coordinated single transportation strategy document (New Brunswick Department of Transportation, 2008), it is transportation-centric and does not think beyond transportation infrastructure components of the Gateway. The strategy must engage all stakeholders (not just bureaucrats) and make clear the incentives for a cooperative and coordinated approach. It must also work towards removing the barriers to coordination in the region.

In order to be successful, a strategy must articulate not only the long-term vision for the Atlantic Gateway, but also the interim steps and outputs that will help to achieve it. (The single transportation strategy noted above is an excellent start.) Whenever possible, these interim steps must be specific and measureable; resources must be dedicated to achieving them; and those assigned responsibility must be held to account for their part. Otherwise, the Gateway initiative risks losing any momentum it might have.

On a related note, all players must keep a watchful eye on international trends, particularly the environment and security issues, not in a fearful way, but rather to adjust operations as required and exploit the opportunities and policy windows that present themselves. These trends will have considerable impact on future outcomes. The region must be able not only to adapt to changing circumstances but exploit events and trends to its advantage. First, however, the region must articulate a shared strategic vision; otherwise, it will not be able to recognize opportunities as they present themselves nor will it be able to act in a coordinated manner when these opportunities arise.

In fact, it is our conclusion that all the plays may be suitable to use in Atlantic Canada, depending on the particular opportunity the players choose to seize in this regional context. Once the choice is made, the champion for the play needs to identify the partners that will help them succeed, secure the coalitions they will need to build (and we believe there is a role for universities here), and seek the social license necessary to execute the plan.

Government can provide considerable support. Its role is not limited to the provision of infrastructure funding. It can broker coalitions, assist in identifying niches for exploration, finance pre-business case development as well as research without immediate commercial benefit but for long-term repositioning and marketing of the opportunities.

An Atlantic Gateway strategy must then think about coalitions and developing embedded relationships of the variety that build activity in the next generation. For example, support for EduNova, the consortium of Nova Scotia universities and colleges that works to attract foreign students, could form part of a gateway strategy built on the premise that students from key markets like India, Malaysia, Vietnam and Brazil could be encouraged to attend university in Atlantic Canada and build business relationships with Atlantic Canada when they return home.

Finally, we need to think about the acquisition of social license. Without transparency and community engagement, community support is difficult to retain. This is a challenge that the Dutch and the Danes have overcome through community education and stakeholder participation; in contrast, this is a vicious deterrent to gateway development in California, where the social license has been severely eroded.

7.0 A Future-Oriented Research Agenda

The Atlantic Gateway Research Initiative has raised some questions about what research gaps exist that need to be narrowed. For example:

- What would be the influence of Canadian GHG policies on Canadian transportation networks and on the Atlantic Gateway in particular? Will environmental policies serve as a ‘nudge’ (Thaler and Sunstein, 2008) in the new field of behavioural economics (and carbon footprint calculators), which promises ‘better’ decision-making by providing the right information and predetermined ‘default options’
- What are the implications of GHG policy options such as carbon taxes or cap and trade regulations on particular modes and the realization of the Atlantic Gateway? Is it in Atlantic Canada’s interest to push for carbon tax or cap and trade environmental solution?
- What are the tipping points in restructuring supply chains: i.e., what volume do we need to seek in restructured supply chains to go from one train per day to the centre of the continent to two? While the target may be known to CN, is it to other supply chain partners?
- What will influence future governance of the Canada-U.S. Border? As a significant volume of goods shipped through the region is destined for the U.S., the efficiency with which they can be transported to the U.S. is crucial. At times, the U.S. government has pursued protectionist and security-related practices that have resulted in a general thickening of the border and slowing of trade; at other times, there has been increased cooperation and coordination between the Canadian and American governments to ensure trade moves efficiently. There is considerable merit in examining both of these somewhat schizophrenic tendencies, and considering their potential impact on an Atlantic Gateway strategy.

Where can universities assist? One obvious answer here is in the development of the pre-business case. While the examples of Dalhousie students investigating the potential for a Cleveland–Halifax short sea shipping service or the Wayne State University investigations of a Detroit inland terminal linked to Halifax come to mind, they are not the only possibilities. The short sea shipping study, undertaken by Brooks *et al.* (2006), began as a classroom discussion and project in the fall of 2004. We need to think about institutionalized knowledge-sharing regimes, and how they can be funded. This requires an open and opportunistic mindset amongst all players in the region.

However, there is a problem in relying too heavily on university–private sector collaboration. Timeframes for private sector interests are often much shorter and more intensive than classroom experiences can offer, and graduate student research timeframes are longer than even patient capital is prepared to wait. University research now follows a much more private sector model than was the case years ago; cross-subsidization of faculty support is needed in the form of reduced teaching loads as universities struggle to cover costs by raising class sizes and workloads. Furthermore, students need funding to live during their course of study and no longer

see participation in university projects as an unfunded volunteer activity. Research grants to universities are also a source of raising funds for other university infrastructure through the application of overhead fees.

What can government do on the research side? It is clear from the research under the AGRI that there needs to be an investment in data for decision-making. The Cyrus (2009) and the Belzer and Howlett (2009) studies both indicated problems with available Statistics Canada data; a Canadian PIERS-equivalent database would be invaluable although PIERS itself has serious flaws. Financing for research in Canadian universities is currently through NSERC, but public policy research of relevance to the Gateway is not a priority of SSHRCC. There is no funding for curiosity-driven research, yet there can be significant gains from such investment. Clearly a reconsideration of government programs supporting research needs some reinvention, not just evaluation.

References

- Adams, Michelle, Pablo Quinonez, Athanasios A. Pallis, and Thomas Wakeman, (2009). *Environmental Issues in Port Competitiveness*, Halifax: Dalhousie University Atlantic Gateway Research Initiative, http://citt.management.dal.ca/Atlantic_Gateway/. Accessed 12 July, 2010.
- Adams, Michelle and Pablo Quinonez, (2009). *Analysis of GHG Management as a Competitive Advantage for the Gateway*, Halifax: Dalhousie University Atlantic Gateway Research Initiative, http://citt.management.dal.ca/Atlantic_Gateway/. Accessed 12 July 2010.
- APEC, (2006). *The Changing Global Economy: The Implications and Opportunities for Transportation in Atlantic Canada*. Halifax: Atlantic Provinces Economic Council, November.
- Belzer, Michael H. and Marc Howlett, (2009). *Transforming Michigan into a Global Freight Gateway: Michigan to Halifax to the World*, Halifax: Dalhousie University Atlantic Gateway Research Initiative, http://citt.management.dal.ca/Atlantic_Gateway/. Accessed 12 July 2010.
- Bohunicky, Brian, (2007). The Atlantic Gateway and Continental Access, Halifax: Speech to the *Atlantic Provinces Transportation Forum*, 12 October (2007). <http://management.dal.ca/aptf2007>. Accessed 2 February 2008.
- Brooks, Mary R., J.R.F. Hodgson and J. D. Frost (2006), *Short Sea Shipping on the East Coast of North America: an analysis of opportunities and issues*, Halifax: Dalhousie University. (Project ACG-TPMI-AH08, Transport Canada) [Http://management.dal.ca/Research/ShortSea.php](http://management.dal.ca/Research/ShortSea.php)
- Brooks, Mary R., (2007a). *Addressing Gaps in the Transportation Network: Seizing Canada's Continental Gateway Advantage*, Toronto: Conference Board of Canada, October. ISBN: 978-0-88763-802-2. <http://sso.conferenceboard.ca/e-Library/LayoutAbstract.asp?DID=2145>. Accessed 12 July 2010.
- Brooks, Mary R., (2007b). *Gateways and Canada's Ports Policy: Issues and Impediments*, presented to the International Conference on Gateways and Corridors, Vancouver, May 2-4. <http://www.gateway-corridor.com/roundconfpapers/papers.htm> Accessed 12 July 2010.
- Brooks, Mary R., Robert J. McCalla, Athanasios A. Pallis and Larissa M. van der Lugt, (2009). *Coordination and Cooperation in Strategic Port Management: The Case of Atlantic Canada's Ports*, Halifax: Dalhousie University Atlantic Gateway Research Initiative, http://citt.management.dal.ca/Atlantic_Gateway/. Accessed 12 July 2010.

- CPCS Transcom, (2006). *Final Report: Gateway Strategy Development Initiative*, A Report prepared for the Province of Nova Scotia, November.
- Cyrus, Teresa L., (2009). *Prospects of Increased Trade between Central Canada and South America*, Halifax: Dalhousie University Atlantic Gateway Research Initiative, http://citt.management.dal.ca/Atlantic_Gateway/. Accessed 12 July 2010.
- Federal Highway Administration, (2006). *PPP Case Studies: Heartland Corridor*, http://www.fhwa.dot.gov/ipd/case_studies/wv_heartland.htm. Accessed 12 July, 2010.
- Giuliano, Genevieve and Thomas O'Brien, (2008). Responding to Increasing Port-Related Freight Volumes: Lessons from Los Angeles / Long Beach and Other U.S. Ports and Hinterlands (Discussion Paper 2008-12), Paris: Joint Transport Research Centre of the Organisation for Economic Co-operation and Development and the European Council of Ministers of Transport, <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP200812.pdf>. Accessed 12 July 2010.
- Government of Canada, (2006a). *Canada's Asia-Pacific Gateway and Corridor Initiative (TP14605)*, Ottawa: Government of Canada, October.
- Government of Canada, (2006b). *Budget 2007*. Ottawa: Government of Canada, October, Chapter 5. <http://www.budget.gc.ca/2007/index-eng.html> Accessed 12 July 2010..
- Gunn, Eldon (2009). *A Total Logistics Cost Framework to Compare the Container Traffic Through the Port of Halifax to Other Routes*, Halifax: Dalhousie University Atlantic Gateway Research Initiative. http://citt.management.dal.ca/Files/Gateway/Working_Papers/Gunn_6.pdf. Accessed 14 July 2010.
- Hardin, G., (1968). The tragedy of the commons. *Science*, 162, (3859): 1243-1248.
- Harrison, Robert, (2008). If We Build It, Will They Come? Public Presentation: Dalhousie University, August 29. http://citt.management.dal.ca/Atlantic_Gateway/Summer_Institute/ . Accessed 12 July 2010.
- Hood, C., (1998). *The Art of the State: Culture, Rhetoric and Public Management*. Oxford: Clarendon.
- Hood C. and Margetts, H., (2007). *The Tools of Government in the Digital Age*. Basingstoke: Palgrave Macmillan.
- Intervistas with MariNova Consulting Limited and TransSystems, (2007). *The Atlantic Gateway Business Case*, Report for the Atlantic Canada Opportunities Agency, September. <http://mediaroom.acoa-apeca.gc.ca/e/library/reports/sectorFocussed/AtlanticGateway.shtml>. Accessed 12 July, 2010.
- Joint Transport Research Centre, (2008). *Port Competition and Hinterland Connections: Summary and Conclusions* (Discussion Paper 2008-19), Paris: Organisation for Economic Cooperation and Development and the European Council of Ministers of Transport <http://www.internationaltransportforum.org/jtrc/DiscussionPapers/DP200819.pdf>. Accessed 12 July 2010.
- Kingdon, J., (1995). *Agendas, Alternatives, and Public Policy*, 2nd Edition. New York: HarperCollins College Publishers.
- Levinson, M., (2006). *The Box: How The Shipping Container Made The World Smaller and The World Economy Bigger*, Princeton NJ: Princeton University Press.
- McMillan, C., (2006). *Embracing the Future: The Atlantic Gateway and Canada's Trade Corridor*, Vancouver: Asia-Pacific Foundation, November.

- New Brunswick Department of Transportation, (2008). *Charting the Course: The Atlantic Canada Transportation Strategy 2008-2018*, Fredericton, NB.
- Osborne, D. and T. Gaebler, (1992). Introduction: An American Perestroika. In *Reinventing Government: How the Entrepreneurial Spirit is Transforming the Public Sector*. Reading, MA: Addison-Wesley.
- Porter, Michael, (1985). *Competitive Advantage*, New York: The Free Press.
- Porter, Michael, (1990). *The Competitive Advantage of Nations*, New York: The Free Press.
- Schmitter, P., (1979). Still the Century of Corporatism? *Trends Towards Corporatist Intermediation*. 7-52. London: Sage.
- Sinnott, Pat, (2007). *The Atlantic Gateway: A Critical Component of Canada's Supply Chain Infrastructure*, Halifax: Speech to the Atlantic Gateway Symposium, May 31.
- Thaler, Richard and Cass R. Sunstein, (2008). *Nudge: Improving Decisions about Health, Wealth, and Happiness*, New Haven, CT: Yale University Press.
- Transport Canada, (2009). *National Policy Framework for Strategic Gateways and Trade Corridors*, <http://www.canadagateways.gc.ca/nationalpolicyframework/nationalpolicy.html>. Accessed 12 July 2010.
- Transportation Research Board, (2009). *Special Report 297: Funding Options for Freight Transportation Projects* (Report of the Committee for Funding Options for Freight Transportation Projects of National Significance), Washington.. <http://www.trb.org/Main/Public/Blurbs/162174.aspx> . Accessed 12 July 2010.
- Wilson, J., (1980). *The Politics of Regulation*. New York: Basic Books.