



ASSOCIATION OF CANADIAN PORT AUTHORITIES
ASSOCIATION DES ADMINISTRATIONS PORTUAIRES CANADIENNES

Ports Modernization Review

**Submission by the
Association of Canadian Port Authorities**

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I. Introduction

As a trading nation, Canada has much to offer the world, and the Canada Port Authorities are a key part of this. Canada's eighteen port authorities are already highly-competitive and efficient players in a very dynamic global transportation system. Nonetheless, this system is changing rapidly. The Minister of Transport's Port Modernization Review provides an opportunity to further transform our port system into one that holistically integrates trade, supply chain partners, new technology, and communities in a predictable, innovative and safe manner. We would like to thank the Minister of Transport for having initiated the Ports Modernization Review, and for the opportunity for Canada Port Authorities to provide input.

The Review has allowed Canada Port Authorities to reflect on the many challenges and opportunities facing them in our evolving global economy. The recommendations within this submission are derived from extensive input from the 18 Canada Port Authorities, including interviews, online surveys and CEO Roundtables. The submission includes chapters and recommendations on foundational port concerns, innovation and trade logistics, relationships with Indigenous Peoples, community relations and environmental sustainability, port safety and security, and port governance.

Canadian ports face many challenges and opportunities in today's evolving global economy, which is redefining the maritime transportation sector. In its recent publication, *Review of Maritime Transport 2018*, the United Nations Conference on Trade and Development (UNCTAD) identified seven key trends shaping the marine sector:¹

- *Relationship between ports and container shipping lines:*
 - Shipping alliance restructuring and larger vessel deployment is redefining the relationship between ports and container shipping lines.
 - Market concentration and ship deployment has impacted the relationship between ports and carriers with respect to the selection of ports-of-call, configuration of liner shipping networks, distribution of costs and benefits between container shipping and ports, and container terminal concessions.
- *Protectionism:*
 - Creates uncertainty from broad geopolitical, economic, and trade policy risks.
- *Digitalization and e-commerce:*
 - Digitalization of maritime transport will help the industry respond to increased demand with enhanced efficiency.
- *Excessive new capacity:*
 - Overly optimistic carriers competing for market share may order excessive new capacity, leading to worsened shipping market conditions.

- *Consolidation:*
 - The way this affects competition, and the potential for market power abuse by large shipping lines as well as the related impact on smaller players, remains a concern.
- *Scale:*
 - The value of shipping can no longer be determined by scale alone. The ability to leverage relevant technological advances is increasingly important.
- *Climate change:*
 - To ensure consistent implementation of the global cap on sulphur, ship owners and operators need to install scrubbers and/or switch to liquefied natural gas and other low-sulphur fuels.

Although these trends reflect the entire maritime transportation sector, some trends are particularly relevant to Canadian ports.

A. Canada Port Authorities

Canada Port Authorities (CPAs) were established under the *Canada Marine Act* of 1998. The Act resulted from an extensive 1993-98 ports review undertaken by Transport Canada, and replaced the former *Canada Ports Corporation Act* of 1983.

Section 8 (1) of the *Canada Marine Act* provides four guiding principles as the foundation for designating Canadian Port Authorities:

- remaining financially self-sufficient
- be strategically significant to Canada's trade
- providing a link to rail and highway infrastructure, and
- having a diverse cargo base

Together, these four principles provide a prism through which port modernization should be viewed.

Canada Port Authorities established by the *Canada Marine Act* work well, and thus we do not hold the view that a “root and branch” overhaul is required in the current review. But CPAs and the global economic environment in which they operate have evolved significantly. Changes are urgently needed to reflect this evolution and to foster port development in support of Canada's ambitious trade agenda. As outlined in Section 4 (a.1) the purpose of the *Canada Marine Act* is to “promote the success of ports for the purpose of contributing to the competitiveness, growth and prosperity of the Canadian economy.”

In the two decades since the adoption of the *Canada Marine Act*, Canada Port Authorities have evolved from being effective land managers to a more dynamic role as facilitators of

trade. Ports provide trade-enabling port infrastructure and are key facilitators in Canada's international and national supply chain system. Canada's ports not only contribute to the Government's trade agenda by moving cargo, but also by underpinning the country's broader trade and logistics ecosystem. This is essential in responding to global economic growth and Canada's increasing international trade interests.

Canada Port Authorities do not seek to compete with the private sector nor to replace other government agencies in trade development, but rather to fill the gap between public and private sectors as "honest brokers" ensuring efficient and effective cargo movement. This evolving role of ports reflects Minister of Transport Marc Garneau's contention that "the transport portfolio is critical for economic growth."²

B. International Maritime Trade Growth

Maritime trade underpins the global economy. Today, ships carry almost four fifths of the world's merchandise trade by volume and 70 per cent by value.³ The World Bank has projected moderate growth of global gross domestic product (GDP) to 2028 at between 2.1 and 2.8 percent per year.⁴ World seaborne trade growth has outpaced global GDP over the past two decades and is predicted to grow at a compound annual growth rate of 3.8 percent between 2018 and 2023.⁵ Growth in maritime trade is already being felt in Canadian ports, generating further need for trade enabling infrastructure and facilities. In 2017, cargo throughput increased 7.3 percent since 2010, a 2.4 percent compounded annual growth rate.⁶

As a major exporting nation with an ambitious international trade agenda, Canada will benefit from growing maritime trade. In turn, the Government's trade agenda will generate additional growth in port throughputs from the impacts of negotiating many multi- and bi-lateral international trade agreements.

Predicted international trade growth from Canada's aggressive trade agenda reinforces the critical need for further development of port and intermodal infrastructure, supplemented with the adoption of innovative technologies. Canada Port Authorities are leaders in supporting this development.

The International Transport Forum (ITF) predicts the North Pacific corridor will become the world's busiest freight route.⁷ This prediction reflects the World Bank's anticipated strong economic growth for China and other South Asian economies.⁸ Asia's projected economic growth validates the Government's many intermodal infrastructure investments in the Asia-Pacific Gateway and Corridor Initiative. Similarly, India's predicted economic growth and the Comprehensive Economic and Trade Agreement (CETA) with the European Union reinforces the need for port and transportation infrastructure in eastern Canada to support anticipated trade increases via the "Suez Express".

The ITF further predicts maritime transport will remain the primary mode for international trade, accounting for 95 percent of global tonne-kilometres by 2050, with the North Pacific trade route more than doubling by 2030 and three times by 2050. While the North Atlantic trade route is also predicted to grow, it will be at a slower pace, increasing 74 percent by 2030 and 268 percent by 2050.⁹

1. Container sector growth

Container traffic through Canada's ports continues to increase. For example, in 2017, throughput growth measured in twenty-foot equivalent units (TEU) in Canada's major container ports was phenomenal: Vancouver +11%; Prince Rupert +26%; Montreal +6%; and Halifax +16%. Together these ports handled 6.3 million TEU in 2017, representing almost 11 percent of North American throughput.¹⁰ Continued containerization growth has led, in some cases to port congestion, which in turn resulted in several proposed container terminal development projects, such as: Vancouver's Roberts Bank Terminal 2; Prince Rupert's Fairview Terminal expansion; Montreal's Contrecoeur project; Quebec's Beauport 2020 project; Saint John's West Side Modernization; and Halifax's extension to the South End Container Terminal.

The container sector is further pressured by the increasing size of ships coming to Canadian container ports. Over the past decade, globally, container ships have doubled in size, with the largest at 22,000 TEU serving the Asia-Europe trade route. Such ship size increases have led to a cascade of larger ships being re-deployed to other trades such as Asia-Pacific and the trans-Atlantic.

2. Bulk sector growth

The dry bulk shipping sector has benefitted from positive trends in population growth, urbanization, infrastructure development, construction activity and industrial and steel output. In recent years, dry bulk commodities have been the mainstay of international seaborne trade, accounting for almost half of the world's maritime trade flows in 2017.

Globally, in 2017, dry bulks and containers recorded the best growth performance with dry bulk increasing by 4.0 percent, up from 1.7 percent in 2016 and containers, 6.4 percent. Seaborne trade in major dry bulks (iron ore, coal and grain) increased by 5.1 percent in 2017, while minor bulks (steel and forest products) increased by 2.2 percent. Dry bulk commodities accounted for 30 percent of total seaborne trade, while containerized trade accounted for 17 percent. Canada is a major dry bulk exporting country. In 2017, Canadian iron ore exports amounted to 3 percent of global trade; coal exports, 2 percent; and grain, 7 percent.¹¹

Crude oil shipments grew by 2.4 percent in 2017, although this was a decrease from 4 percent in 2016. Although the crude oil trade has declined, other tanker trade increased by 3.9 percent in 2017, with the major growth occurring with liquefied natural gas (LNG) tankers at 9.6 percent. Globally, maritime tanker trade increased by 3.0 percent in 2017.¹²

Overall traffic on the St. Lawrence Seaway rose by 1 percent in 2017, with major increases in bulk shipments up 19 percent over 2016 and general cargo, up 22 percent.¹³

Globally, world seaborne trade is expected to expand at an annual compound rate of 3.8 percent to 2023.¹⁴ This global growth will continue to impact Canadian ports.

3. Cruise sector growth

Canada is particularly blessed with scenic cruising waters on both coasts attracting increased numbers of cruise ships and their passengers. There are several cruise ship homeports, such as Vancouver, Montreal and Quebec. Homeports increase local and regional economic benefits as cruise ships visiting these ports transfer passengers while taking on stores, supplies and fuel between cruises. Cruising is increasingly pervading Canada's ports as cruise lines seek unique scenic destinations such as travelling up the Saguenay Fiord and visiting smaller ports on both coasts and on the Great Lakes. In the latter case, smaller cruise ships are increasingly visiting Canadian Great Lakes ports providing their passengers with the unique opportunity to travel on our bi-national inland waterway.

The cruise ship fleet is predicted to grow by 22 percent over the next decade to 472 vessels. As most of new cruise ships on shipyard orderbooks are larger, the industry expects a 48 percent increase in cruise ship passengers to almost 40 million by 2027.¹⁵ The continued growth of the Canada's cruise sector requires further port investments to meet future needs.

C. Port Authority Challenges and Opportunities

There are many challenges and opportunities facing maritime trade and ports. Cargo, container and cruise ships continue to grow ever larger as ship owners seek economies of scale. The rapid increase in ship size is best exemplified in the container trade where container vessels more than doubled in size over the past decade. Rapid increases in ship size challenges ports in their ability to handle larger vessels. Trade routes and the ports that ships serve are dynamic and changing as shipping lines adapt to recent international canal expansions and the growth of developing country economies.

Ports face further challenges beyond continued trade growth. Larger ships require additional infrastructure investment to handle growing cargo volumes and added landside storage capacity for increased peak loads. In addition, larger ships challenge ports to provide deeper approach channels and berths, larger turning basins, along with bigger and more productive cargo-handling equipment and processes to ensure efficient ship turn-around.

Autonomous ships, automated cargo-handling equipment, Artificial Intelligence, cyber security threats, and 3-D printing reflect disruptive technologies that will challenge today's ports, seafarers and labour, while also creating opportunities.

Climate change adds further port challenges with forecast rising sea levels and extreme weather events, to say nothing of increasing temperatures leading to altered fish habitat and shifting agricultural areas. Maritime environmental challenges abound as governments adopt new and rigorous international rules and regulations, such as the IMO's conventions on ballast water management, emission control areas, curbing SO2 emissions, and significantly reducing greenhouse gas emissions by 2020 to meet the 2016 Paris Agreement goals.¹⁶

Environmental concerns coupled with growing interest in the waterfront from an increasingly informed population also challenge ports. As outlined in Section 4 of the *Canada Marine Act*, CPAs must not only consider the "competitiveness, growth and prosperity of the Canadian economy", but also take steps to support "the achievement of national, regional and local social and economic objectives." Ports seek to mitigate the impact of their operations on nearby communities, including consulting and engaging with Indigenous peoples.

Taken together, these issues paint a picture of a rapidly-evolving seascape – one in which Canada's ports must adapt rapidly and innovatively.

II. Foundational Requirements

The Association of Canadian Port Authorities (ACPA) on behalf of all Canada Port Authorities has consistently requested fundamental changes to Government legislation and regulations to enable ports to fully achieve their potential in enabling Canada's ambitious international trade agenda.

The foundational requirements identified by CPAs have been submitted on several occasions to previous Ministers of Transport and Transport Canada officials and bear restating here. Major ACPA submissions include:

- 2012 White Paper: "Strengthening the Canada Port Authorities – Key Enablers of Canadian Trade" (Appendix A)
- 2017 White Paper: "Modernizing Canada's PILT Act: Rectifying the PILT Act to resolve outstanding Canada Port Authority concerns" (Appendix B)
- along with numerous CEO Roundtables with senior Government officials focusing on port authority concerns

There are three fundamental issues for which Canada Port Authorities have repeatedly sought solutions from Government:

1. land acquisition and disposal
2. financial flexibility, and
3. expediting board appointments

Canada Port Authorities believe that if these fundamental recommendations are not acceptable to Government, then further port modernization will be difficult to implement.

A. Land Acquisition and Disposal

1. Letters Patent amendments

An important piece of a CPAs' activity is managing its lands to support port operations and development plans. This is executed through the port's Letters Patent, which occasionally require amendment to reflect changes in port lands. The current process to amend a port authorities' Letters Patent is lengthy and generally opaque. Timelines run into several years to process even basic, non-contentious changes (such as change of head office address), and require input and vetting from at least three federal departments. Once initiated, the process is closed to CPAs, making it nearly impossible to determine at what stage the request is at, nor when it is expected to be completed. This results in either lost opportunities, or greatly increased costs.

One CPA recounts how they wished to acquire a parcel of land that would support their development plans. Knowing it would take at least two years to process the amendment to the Letters Patent, the CPA was forced to lease the land at preferential rates to hold onto it while they pushed through the Letters Patent amendment process. Another CPA recounts how it cost them close to \$50,000 in legal fees to acquire a piece of land that was being given to the port for *free*.

Canada Port Authorities were established with a governance structure designed to responsibly manage federal assets. They have been delegated important federal land management responsibilities by the *Canada Marine Act* and their Letters Patent, and have responsible Boards of Directors overseeing their stewardship of port lands. Port authorities regularly undertake multi-million dollar port development projects in a competitive commercial environment, founded on well-developed business plans and combining numerous sources of financing, including commercial lenders.

The foundation exists for responsible fiscal management of port lands. This should be supported by a faster, more transparent Letters Patent amendment process for all CPAs. In short, let CPAs do the job they have been empowered to do.

Recommendation:

The Federal Government should extend to all Canada Port Authorities greater decision-making authority to acquire and dispose of land, in accordance with each Port

Authority's Board-approved business plan, and subject to Board of Directors approval, without requiring amendments to their Letters Patent.

Transport Canada should develop realistic, short timelines for completion of remaining Letters Patent Amendments, and adhere to these timelines. Suggestions to simplify and streamline the Letters Patent amendment process include:

- *undertake reviews among various departments in parallel, rather than in sequence*
- *develop a flowchart that establishes the process that amendments will follow, with checklists and periodic "windows" into the status of the application. This will provide port authorities with insight on what step in the process their application is at and the length of time remaining for completion*
- *working with Canada Port Authorities, establish appropriate criteria for, and implement a fast track process to address high priority requests within an expedited timeframe*

A further solution to expediting Letters Patent amendments and other port concerns is the appointment of a ports advocate within Transport Canada. A designated port advocate would help manage priority files and ensure CPAs are kept informed of their progress, while respecting and maintaining the confidentiality of the internal processes.

Recommendation:

Transport Canada should establish a Ports Advocate within Transport Canada with the direct responsibility to support and help expedite Canada Port Authorities' applications for Letters Patent amendments and Board appointment processes.

2. *Facilitating inland and multimodal trade functions*

Canada's ports have evolved over time, to a point where they are no longer simply spaces where ships are loaded and unloaded. Port authorities are now emerging as facilitators within the supply chains of multiple industries, by providing services across various transportation modes.

Thus, the focus is not on a single point (the port) but rather on the end-to-end supply chain. International shippers are not attracted to a port simply because it has modern and efficient terminals; it's what is beyond the port that counts. Shippers are interested in modern and efficient supply chains that get their goods from origin to final destination fast, economically and consistently. Ports play a key role in integrated supply chains. For example, the Port of Prince Rupert's success was based on its overall supply chain as 80 to 90 percent of their containers flow through the port to the Canadian and U.S. mid-west. Success came from all the supply chain stakeholders and their respective infrastructure and investments working in collaboration to ensure the entire supply chain value.

The language of the *Canada Marine Act* and its regulations limits the ability of CPAs to provision of ‘shipping and navigation’ services, for the movement of goods and people. This has the effect of mostly restraining their ability to create ‘inland ports’ or other multimodal logistics facilities integrated with the marine functions of the port. Port legislation and regulations should encourage port authorities to participate in the entire supply chain system to improve the effectiveness and integration of trade.

Recommendation:

Ports’ regulatory framework should ensure port authorities are more expressly empowered, as part of their core mandate, to engage in trade-facilitation activities, notwithstanding the primary mode of transportation, which may include logistics facilities, inland ports and supply-chain related uses.

B. Financial Flexibility

1. Subsidiaries

Shippers are keenly interested in the integrated supply chain that lies behind ports. Port authorities need to be able to participate in, invest in, and partner in supply chain activities that go beyond current legislation that confines port activities to the movement of goods at the port or on port lands.

Canada Port Authorities should be allowed to create non-wholly owned subsidiaries for operations on non-port properties and, if required, for non-port activities. This approach provides an innovative financing mechanism. For example, a port authority could create a subsidiary and sell a portion of the shares to a private sector participant to build a major new infrastructure development. This form of financing mechanism could also be used to encourage First Nations participation in the port’s economy by creating a subsidiary that is partly owned by First Nations and is a business operation with port-related activities.

Recommendations:

Canada Port Authorities require flexibility to capitalize subsidiaries without constraints, such as a cap on earnings. Therefore, the Government should remove the calculation for investment in a subsidiary, and allow investment limits to be determined by the commercial market.

Allow port authorities to hold an equity stake in a Special Purpose Entity or Joint Venture where the main activities are related to port operations or to support port operations. This will enable Canada Port Authorities to share the risks, but also share the rewards of business development activities.

Amend the Canada Marine Act to allow a client to become a guarantor for a port project.

The federal government should provide loan guarantees for infrastructure projects of all sizes. Funds received from other programs such as the Canada Infrastructure Bank and the Quebec Maritime Strategy should be excluded from the calculation for port borrowing limits.

2. *Port infrastructure funding*

Ports are key to enabling Canada to succeed in developing global trade. Canada Port Authorities must be flexible and adaptable to changing circumstances in responding to dynamic market forces. Port authorities require enhanced autonomy and flexibility allowing them to take timely action in pursuit of trade-related opportunities while reducing time-delaying restrictions imposed by Government legislation, regulations and other requirements.

Given the importance of trade-enabling port infrastructure and the National Trade Corridors Fund (NTCF) oversubscription, Canada Port Authorities are pleased with the Government's announcement to accelerate NTCF funding. With the \$773.9 million brought forward for the next five years, CPAs see a clear opportunity for them to contribute to Canada's economic and job growth through trade diversification and infrastructure development. Such future NTCF investment in Canada's ports will send a strong and tangible global signal that Canada is building for its future.¹⁷

Despite the recently announced accelerated NTCF funding, Canada Port Authorities still require support for port infrastructure development. The first NTCF call for proposal elicited 357 Expressions of Interest with a total value of \$75 billion (and seeking more than \$16.9 billion in federal funding) from a broad range of proponents. Transport Canada assessed 177 eligible comprehensive project proposals seeking more than \$7.5 billion. Forty of the 177 proposals had a port proponent or partner. Ultimately, the Minister of Transport selected 37 high-performing projects and committed \$770 million in NTCF funding. Fourteen of the selected 37 projects had a port proponent or partner.¹⁸

However, although ports were reasonably reflected in the selected projects, many more were left on the wayside with unfulfilled infrastructure development requirements.

Nonetheless significant gaps remain as Canada Port Authorities inherited aging infrastructure that was underfunded for decades by previous governments. The challenge facing CPAs is that although this legacy infrastructure requires rehabilitation, it does not attract private investment partners.

A 2011 port infrastructure study undertaken by ACPA and Transport Canada found a third of the port authorities' infrastructure investment requirement was for rehabilitating existing assets. Canada Port Authority rehabilitation requirements amounted to \$1.9 billion, comprised of waterside infrastructure - \$792 million; landside infrastructure - \$758 million; and intermodal and other infrastructure needs - \$358 million.¹⁹

The port infrastructure challenge is being experienced in very real terms: For example, the Sept-Îles Port Authority was recently forced to shut down operations on its Pointe-aux-Basques terminal due to its deteriorating infrastructure. The port authority has sought funding support since 2016 and is ready to proceed with the necessary upgrades, but has been unable to secure federal funds.²⁰

The lack of funding support for both legacy facilities and developmental projects hampers the ports' abilities to respond to growing trade-related cargo demands, cruise industry potential, and technology investments to enhance their efficiencies.

Recommendation:

The Government of Canada should establish a fund to assist Canada Port Authorities in rehabilitating legacy infrastructure in support of defined commercial and trade development needs.

3. Borrowing limits

The Minister of Transport sets each port authority's borrowing limit. The Canada Port Authority borrowing limits were initially set extremely low and most CPAs' financial capabilities and infrastructure costs have grown significantly since the low limits were set. Currently, amending CPA borrowing limits must be sought on a case-by-case basis. Changing borrowing limits is costly, onerous and slow – often taking upwards of four or more years to complete, even for the most basic changes. Further even for deals in which land might be otherwise acquired for free, legal fees to process the changes through a long timeframe add significantly to the cost. This prevents a timely response to emerging trade opportunities.

Recommendation:

Revise the current procedure for establishing borrowing limits so that limits are determined by commercial financial institutions, or by using criteria similar to those of commercial financial institutions, with a capped timeline that must be met.

OR

In lieu of borrowing limits, the Government should establish minimum credit ratings and/or reasonable debt servicing metrics for each CPA to achieve and maintain, and permit borrowing within normal market ranges.

C. Expediting Board Appointments

The Government's current ponderous and slow Board appointment process has left many port authorities with a reduced number of members on their Boards of Directors. Delays in appointing directors seriously impact the Boards' ability to function. Several Boards have dropped to less than half of their complement of directors, preventing them from developing critical strategic plans for the port authority. A further unforeseen consequence of extensive appointment delays is that well qualified candidates have withdrawn prior to their eventual appointment. At the same time, User Group Nominating Committees become discouraged, as their efforts in nominating suitable candidates are not addressed in a timely manner. Sitting Board members are discouraged at the perceived lack of importance accorded by the Government to ensure the proper functioning of ports as key public assets.

There is a clear need for consistent and timely CPA Board appointments that reflect and respect both the work that went into developing the nomination lists as well as the Board-approved competencies matrices for each CPA.

Recommendations:

The Government of Canada should ensure a faster Board appointment process, by allowing no more than 6 months to elapse between when the nominations are presented and the appointments are confirmed.

All Board appointments should strictly adhere to the Board of Directors candidate requirements as defined within their approved competencies matrix.

The Government should respect the work of the User Group Nominating Committees by:

- *addressing their nominations in a timely manner, and*
- *appointing User Group candidates from the lists provided by the User Group Nominating Committees, in concordance with the port authority's Board-approved competencies matrix.*
 - *In instances where the government seeks nominees from outside of the lists provided, the government should seek the input of the port authority CEO regarding the proposed candidates.*

III. Innovation and Trade Logistics

A. National Transportation Strategy

There is a clear need for an overall National Transportation Strategy that identifies Canada's priority trade corridors and key port gateways. Such a national strategy is required to guide

Government and stakeholder infrastructure investment and future transportation development. Canada Port Authorities often find themselves seeking collaboration with supply chain partners and other stakeholders on various trade-related issues on a case-by-case basis. A clear national transportation strategy would assist CPAs and their supply chain partners in developing an optimal logistics system.

Recommendation:

Transport Canada, working with Global Affairs Canada / Trade Diversification, should develop a National Transportation Strategy that identifies and validates priority trade corridors and gateways that are responsive to the Canada Marine Act's guiding principles.

The resulting strategy would then enable the Federal Government to bring sharper focus to port investment and development initiatives. In addition, and within that Strategy, the government must create identified industrial centres and transportation corridors, and protect the land associated with those centres and corridors for those uses.

B. Tiered Policies and Regulations

Canada Port Authorities have evolved and diversified. “One size fits all” is no longer a relevant policy with respect to port authorities. There is a clear need for a tiered set of port-related policy and regulatory tools that reflect port size.

Port size is an essential element in devising appropriate policy tools and regulations. For example, larger port authorities have sufficient financial and human resource capacity to undertake a variety of activities required by Government, such as: environmental impact assessment; determining port property value; marketing initiatives and so forth. But smaller port authorities lack sufficient in-house capacity to readily undertake these activities. Thus, Government assistance for smaller ports is essential in comparison to larger ones, as well an adaptation of tools for ports of varying sizes.

Recommendation:

Recognizing that port authorities have evolved such that “one size does not fit all”, Transport Canada should develop tiered sets of policy tools and instruments based on Canada Marine Act principles and port size to meet the diverse needs of Canada Port Authorities and their regional and local contexts.

C. Economies of Scale and Technology

Scale is driving supply chain economics. This is the case for all port throughputs: bulk, containers, and cruise. Shipping lines continue to build bigger ships, railways continue to run

longer trains, and terminal operators demand larger and more automated facilities. This means port authorities have to embrace economies of scale and modern technologies to succeed. Port authorities will need to build larger and more costly facilities to serve growing supply chain needs both on the water- and land-side. Further, ports need to broaden their perspectives to ensure supply chains can respond to larger surges of cargo flowing through the system as well as responding to pressures from the surrounding urban environment.

In their continuing evolution as trade enablers, Canada Port Authorities are extending their operations and activities beyond their important initial role as port land managers. Modern Canadian ports have become multi-modal industrial hubs, including the development of:

- logistics centres – the nexus for the many stakeholders in the country’s domestic and international supply chains
- transformational hubs – supporting the development of value-adding components within the port, such as flour mills, containerizing grain shipments and other processes to convert materials to higher value import and export products
- trade enabling port infrastructure – to support continued commodity throughput growth
- information centres – providing sophisticated data management tools and techniques to support improved information sharing amongst supply chain partners to expedite commodity flows and improve port efficiencies and productivity
- new employment opportunities – supporting the economic growth of the community and region

Canada Port Authorities play a significant role in supporting new and emerging technologies to enhance trade efficiencies. The ability to innovate is a fundamental component of the port authorities’ contribution to supply chain competitiveness. New technologies such as Artificial Intelligence, equipment automation, autonomous ships and vehicles, alternative energy applications, all contribute to the CPAs evolving role as trade enablers and supply chain facilitators.

It is essential that Government support the development and adoption of appropriate technologies for the movement of goods and people. This means focusing on transportation and ports innovations along with education initiatives supporting entrepreneurship and small business development.

Recommendations:

Transport Canada should establish a joint “Future Visioning” group with Canada Port Authorities to define future logistics/transportation and trade diversification innovations and identify emerging trends and needs.

In support of the above, Transport Canada should conduct research on the future of shipping for Canadian Ports with an emphasis on key questions:

- *what will evolving import/export channels look like?*

- *where is sector growth predicted?*
- *what opportunities/challenges will ports face over the next 10 years?*

This research should be shared with all CPAs and related marine stakeholders, and a mechanism should be established to implement the vision as developed by the group.

D. New Frontiers in Data Management

All cargo is, in some way, attached to information. A tonne of bulk cargo comes with relevant information regarding cargo type, grade, ownership, customer and so forth. Each container comes with a much larger cluster of relevant information. Supply chains that allow relevant and associated data to flow easily in tandem with the cargo through the system and be accessible to stakeholders in real time will be overwhelmingly successful. This is definitely where Canadian ports have to position themselves in facilitating supply chain logistics.

Modern port legislation has to provide CPAs with the power and authority to be the initiators, the catalysts, the architects to develop an integrated supply chain data management approach. The model for success should be something akin to what happens when somebody orders a product on-line and then can track on-line and in real time the delivery progress from the manufacturing floor to their doorstep.

Integrated information technology and advanced data management are the next frontier of port efficiency. Numerous disruptive technologies such as blockchain applications are being tested in various formats, but none have yet gelled. Nonetheless, change is already happening – being driven by performance imperatives among ports.

For example, the Halifax Port Authority has joined a digital global platform developed by Maersk and IBM that involves the blockchain-focused digitization solution “TradeLens.” Halifax’s goal is to participate in the development of a secure digital ledger system promoting the sharing of information across the global shipping industry to reduce costs, improve productivity, increase the speed of goods delivery, enhance security, and provide transparency.²¹

To capture and retain a place at the head of the data management evolution, and to ensure future port competitiveness, CPAs must take a leadership role in bringing supply chain partners together to experiment with and develop a consistent national approach to data sharing.

The challenge is having all stakeholders on the same page and willingly sharing data for overall supply chain efficiency. Transport Canada can assist by encouraging participation. Canada Port Authorities as honest brokers have a leadership role in developing a port-oriented, Canada-wide supply chain data sharing and management system.

Currently, Transport Canada is undertaking various trial projects with individual port authorities. There is now a clear need to coalesce these individual pilot projects into a

unified, national model. Two specific issues need to be addressed: what data is to be shared; and, process - who is involved and what technology will be used.

A joint Transport Canada – Canada Port Authority Working Group is needed to bring all stakeholders together to devise a level platform and access to basic data to respond to market needs. The system must be open and transparent to all participants. Essentially the goal of the Working Group should be to establish a data management and sharing system with ports as honest brokers or “governors” collaborating collectively with Transport Canada, Canada Border Services Agency, and supply chain partners to leverage system efficiencies.

Recommendations:

Canadian Port Authorities undertake to establish a working group focused on common efforts in developing technology to support supply chain efficiency. The Joint Working Group would be responsible for developing a digital road map with prioritized projects and support an industry-wide adoption of innovative technologies. Transport Canada and Canada Border Services Agency must be active participants in that working group.

Transport Canada should establish an appropriate technology fund to advance prioritized projects identified by the Joint Working Group.

Transport Canada should continue to expand access to data across all port authorities and other stakeholders in the supply chain, with the goal of bringing all players to the same level of utilization.

Government should ensure continued, long-term funding support for Transport Canada’s Data Initiative, as this project is essential for continued efficiencies in Canada’s ports and supply chains.

Observation:

Given the critical role that Canada Border Services Agency plays in facilitating the movement of cargo, the Agency must become an active participant in exploring and adopting new technologies, appropriate data sharing with ports and supply chain partners, more rapid clearance procedures and so forth.

E. Workforce of the Future

The port workforce of the future is intimately linked to uptake of new technology. As disruptive technologies come into widespread use, skill mixes are radically changing. The increasing use of automated cargo-handling systems favours workers familiar and adept with today’s gaming culture. Older workers are at risk of disenfranchisement if ports are

unable to find ways to value and use their experience while upgrading their skills to meet new needs. At the same time, the marine sector faces critical labour shortages as young workers' adept in today's pervasive cyber culture are not being attracted to the transportation and logistics sector.

Developing automated terminals and equipment in ports will have a significant impact on port workers. Any step in this direction must ensure port workers and relevant labour unions are integrated into project planning and implementation.

Canada Port Authorities offer tremendous potential as living laboratories within which to explore the impact of disruptive technologies and the needs of the workforce of the future. If properly supported in their trade-enabling efforts, port authorities can help generate the human capital required to support tomorrow's port and logistics sectors.

Canada Port Authorities are concerned about responding to the need for future, skilled workers. Many port authorities are actively encouraging students to consider employment in the ports and logistics sectors by providing scholarships for transport and logistics – related studies, offering port tours to elementary and high school students, providing educational support material for classroom discussion of port-related activities in their communities and supporting apprenticeships and internships.

For example, the Hamilton Port Authority has embarked on several initiatives with Mohawk College to address some of the port's future workforce needs.²² These collaborative initiatives include:

- working with port-located companies to create co-op and internship placements complimenting students' studies in Mohawk College's Supply Chain Management Program. In addition, HPA set up a \$20,000 tuition support fund to assist local students enrolled in the program.
- working closely with Mohawk College's CitySchool to create a pathway to skilled trades jobs. Backed by a \$10,000 HPA contribution, CitySchool now offers a free, on-site introduction to welding, an in-demand skill among Hamilton's industrial employers.
- further, HPA works with the CitySchool team on partnership development through a research grant from the Ontario Centre for Workforce Integration. This research is aimed at providing CitySchool with an understanding of the training, hiring and retention needs of HPA partners and how Mohawk College can prepare students for a career with a large employer like the Port of Hamilton.

Recommendations:

Government must develop a system or set of programs to incentivize young workers to seek employment in the transportation sector.

Government should leverage the “partnership hub” capacity of Canadian Port Authorities – ports can play a pivotal role as conveners of regional and local workforce discussions, bringing together the port community with education and training providers and labour unions to identify current gaps and future needs, leading to workforce education and training plans.

Where desired, and subject to the individual capabilities of each port, Canada Port Authorities should be supported in becoming living laboratories for university / college / labour union / knowledge pilot projects. This step could include a regional approach to joint labour /supply chain projects.

Where desired, and subject to the individual capabilities of each port, Canada Port Authorities should be supported in creating incubator facilities for marine transportation-related projects, either through the allocation of physical space or through financial or in-kind support for the initiatives.

IV. Relationships with Indigenous Peoples

The Federal Government is committed to renewing its relationship with First Nations, Inuit and Métis peoples based on the recognition of rights, respect, cooperation and partnership. Within the proximity of Canada’s ports, there are more than a hundred Indigenous communities living and practicing their constitutionally-protected rights. These communities are diverse and their interaction with ports vary significantly.

Canada Port Authorities have embraced relationship building with First Nations. The engagements between CPAs and Indigenous communities are wide-ranging, varying from informal engagements to more formal and detailed Protocol and Partnership Agreements. Formal agreements can provide significant economic participation and benefits to local Indigenous communities. They offer powerful examples of how partnerships can be established around concrete issues to advance both Indigenous interests and effective port operations.

One example is that of the Prince Rupert Port Authority which, in 2011, entered into agreements with the Tsimshian First Nations to provide certainty in the Port of Prince Rupert container business growth strategy, and specifically, the Fairview Container Terminal expansion. The agreements entrenched First Nation’s participation in the growth and expansion of the Port in the form of financial payments, preferred contracting opportunities associated with expansion, and training and employment opportunities associated with impacts arising from constructing and operating the terminal on the Coast Tsimshian’s traditional territory. Since these landmark agreements were reached, First Nations construction companies have delivered in excess of \$100 million in capital works

projects for the Prince Rupert Port Authority, established companies in the gateway economy and represent in excess of 30% of the workforce.

Other Canada Port Authorities have likewise entered into specific First Nations agreements and protocols that reflect their unique circumstances, including: Belledune Port Authority, Saint John Port Authority, Quebec Port Authority, Toronto Port Authority, and Vancouver Fraser Port Authority.

Despite these initiatives, consulting and engaging with First Nations nevertheless remains a complex issue. One that requires clarification by the Government on such issues as: overlapping claims from multiple First Nations and Bands; and, unresolved treaty negotiations that may arise during consultation. There is often confusion with respect to which federal department or agency (Transport Canada, Canadian Environmental Assessment Agency, Fisheries and Oceans Canada, Indigenous and Northern Affairs Canada, or others) is responsible for consulting with First Nations on matters relating to environmental impacts and economic accommodation.

Given the Government's commitment to reconciliation with engagement and consultation with Indigenous Peoples and that many port authorities' operations take place on traditional lands, including extended traditional territories of many Indigenous groups, appropriate consultation and engagement approaches need to be established and formalized across the varied ports spectrum as part of modernizing Canada's ports.

A. Issues and Challenges

1. Appropriate consultation

Each Canada Port Authority is unique in the impact of its operations and developments on First Nations communities. One size indeed does not fit all: some ports operate on ceded lands, while others are on un-ceded territories; some ports are within treaty lands, while others are in a non-treaty situation; and, some ports face overlapping claims from multiple First Nations, while others do not. As a result, each port's level of engagement is different depending on their unique circumstances.

The *Indian Act* separated and divided traditional aboriginal tribes into smaller "bands" and created "band councils." This has led to uncertainty in consultation and engagement. For example, with overlapping land claims and the division between band councils and hereditary chiefs, government guidelines are required to clarify who should be consulted and engaged.

Canada has some 634 First Nations; each with their own specific interests and needs. In some cases, CPAs can engage with a relevant group of First Nations through an overarching structure the First Nations have devised (such as in Prince Rupert's Coast Tsimshian First Nations). But in other cases, port authorities face several First Nations, often with

overlapping claims. Government guidelines are needed to resolve this consultation and engagement challenge.

Further, there is a strong need for clarity and direction from the Government in fulfilling its commitment to reconciliation with Indigenous Peoples. Currently, there are differing expectations on what constitutes adequate consultation, especially in the context of the United Nations “Declaration on the Rights of Indigenous Peoples” (UNDRIP), notably Article 32.2:

States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.

Recommendation:

*The Government must clarify the meaning and application of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the Canadian context, particularly as it relates to what constitutes **consent** versus **engagement** in the port authority environment. This must focus on process guidance, not outcomes guidance, and must take into account the regional variations in CPA relationships with their First Nations communities.*

UNDRIP notwithstanding, there is a growing appreciation of the value of ensuring First Nations perspectives are woven into the fabric of CPAs’ planning and engagement processes. This includes participation on CPA Boards, in situations where the local context renders this appropriate. The most effective way to do so is to include First Nations knowledge in the skills matrices that support Board planning processes, and to provide direction to the Board Nominating Committees to seek appropriate candidates. This maintains proper governance discipline while ensuring critical skills and knowledge are brought to CPA planning.

Recommendation:

With respect to First Nations presence on CPA Boards, direction should be given to Board Nominating Committees to seek appropriate First Nations candidates, in concordance with each CPA’s Board-approved strategic plan and skills matrix, in ports where this is appropriate.

V. Sustainability of Ports and Communities

Historically, ports have always been the heart of their communities driving local and regional economic development as well as shaping community quality of life. The contiguous nature

of ports and communities creates the need for continuous mutual interaction, involvement and understanding.

Global economic growth has increased commodity throughput in Canadian ports. Such increased throughput may have little, if any relevance to the local or even regional community as commodities are often destined for far inland Canadian and U.S. markets. The port's inland beneficiaries are not affected by negative externalities from port operations, but local communities may be impacted. Thus, local communities may not always welcome increased port throughput as it may lead to delays from lengthy freight trains, congested highways, limited access to the waterfront, and environmental pollution (air, noise, light spillage, water, dust). Thus, cargo growth has, at times led to "global change - local pain."²³

A. Enhancing Community Relations

Canada Port Authorities understand the importance of their role within their local communities. Port authorities invest in community endeavors and seek to minimize and eliminate any detrimental environmental effects of port operations.

1. Community investments

Port authorities strive to safeguard and invest in the communities' social, cultural and environmental fabric and are proud to actively invest in their communities. Over the past five years, port authorities have contributed more than \$22 million to their communities, in simple contributions to local programs.²⁴ This does not include the value of park lands given over to municipalities for community enjoyment, nor the volunteer hours donated by port employees in support of local projects.

Further, port authorities devote a portion of their profits and financial success to build and support innovative local businesses. Such CPA support creates jobs and the growth of new markets, in turn generating further cargo throughput. As trade business developers, CPAs have evolved into leadership roles supporting trade initiatives within their communities and regions.

Port authorities make significant financial and in-kind contributions to support the economic, social, cultural and environmental wellbeing of their communities. However, despite CPA efforts in community consultation and engagement, supporting community projects and activities, and mitigating operational externalities, at times, there is negative feedback from some community members.

Ports interact with their adjoining communities in many ways. For example, the waterfront has become an increasingly attractive asset for community recreation and urban development. However, providing universal waterfront access on port lands is a contentious issue in the face of heightened security requirements under the IMO's International Shipping and Port Security code. Despite these security constraints, many port authorities have improved community access to the waterfront.

For example, the Prince Rupert Port Authority made a substantial contribution from its Community Investment Fund to rehabilitate the Rushbrook trail, a 1.2-kilometer walkway adjacent to the port's inner harbour. Similarly, the Hamilton Port Authority built a new viewing platform on Pier 15 to allow the public to see the port's harbour activities.

2. Community outreach and contributions

As outlined in detail in Appendix C, "Community Relations and Outreach Programs and Initiatives", Canada Port Authorities strive to maintain harmonious relations with their local and regional communities by interacting with them and contributing to a myriad of community projects and activities. From west to east, CPAs have made significant contributions to the social, cultural, economic and environmental wellbeing of their communities. Many port authorities have established formal processes to seek proposals for community contributions. Further, in recognition of their long-standing commitment to their communities and to partnerships with First Nations peoples, many port authorities have undertaken, on a voluntary basis, to commit a portion of their operating revenues for investment in community and/or First Nations initiatives, as per each port's strategic plan.

The following sections outline examples of the many forms of community outreach and contribution provided by Canada Port Authorities across the country.

a) West Coast ports

Each year, the Port of Prince Rupert Port Authority invests a share of its net income in local projects that contribute to the region's quality of life and create long-lasting benefits. As examples of the many projects supported by the port's Community Investment Fund, PPRA contributed to the development of the Peter Witherly Music Studio and the restoration of the historic North Pacific Cannery.

The Vancouver Fraser Port Authority supports its Cause Campaign, active educational support, including scholarships and a school Leadership program as well as an extensive engagement program with its 16 adjacent municipalities and several First Nations.

b) Great Lakes ports

The Hamilton Port Authority supports many community activities including the Mission to Seafarers, City Kidz, Liberty for Youth, North Hamilton Community Health Centre, Bay Area Easter Seals Regatta, Children's Water Festival and scholarships, including providing support funding for a supply chain management program at Mohawk College.

The Toronto Port Authority supports a wide range of community initiatives and charitable organizations, including a school visits program, sailing opportunities for the disabled and partnering with the Toyota Evergreen Learning Grounds Program to create outdoor space for downtown and waterfront schools.

c) St. Lawrence River ports

The Montreal Port Authority has established a Good Neighbor Committee and is using an email list of 16,000 neighbouring households to convey current port information and to organize community meetings on port-related matters. The port also sponsors many community activities such as Vélpousses, EcoMaris to educate youth on the environment and marine trades, heritage cruises, and Samjam community team building. Similarly, the Trois-Rivières Port Authority supports a variety of community events and activities on the waterfront.

The Québec Port Authority has involved the community in the design for Anse au Foulon, a two-kilometer waterfront pedestrian and cycle path. The port's open house day attracted more than 7,000 visitors for a harbour cruise and visits to the port's terminals.

d) Atlantic ports

The Belledune Port Authority provides annual contributions to several charities and community organizations. Similarly, the Saint John Port Authority hosts over 8,000 visitors to its community and ports day event. The port supports the annual Harbour Lights campaign which supports food banks across southern New Brunswick and contributes financially and through volunteerism to helping hand charities. Saint John has also developed extensive school curriculum materials to assist in educating children on the port and its important role in supporting Canada's economy.

The Port of Saint John undertakes an annual Harbour Lights Campaign to raise money for food banks in Southern New Brunswick. Over the past 22 years, more than \$3 million has been raised for 14 food banks from St. Stephen to Sussex. Each November, the operations team at Port Saint John assembles a giant Christmas tree of 52, 800 twinkling lights at their Long Wharf terminal in support of the Campaign. The campaign progresses bulb by bulb and when the financial goal is met, the star on top is lit

The Halifax Port Authority has partnered with St. Mary's University to set up an intern program for students involved in international studies. The port donates staff time and expertise along with financial support for many charities, cultural groups and skills-development organizations.

The St. John's Port Authority supports annual post-secondary student scholarships across the province, the Harbour Lights charitable fundraiser, Computers for Schools program and hosts a variety of local community events on the waterfront. Recently, the SJPA decided to contribute 0.5% of its operating income each year for 5 years to United Way charities in Newfoundland and Labrador (totalling approximately \$200,000).

3. Environmental mitigation

Port authorities seek to mitigate any negative externalities that emanate from their operations. For example, many port authorities have installed air quality monitors to provide

real-time information on air-borne contaminants being emitted from terminal operations. This allows the port to take immediate steps to prevent contamination.

Some port authorities have entered municipal service agreements and other mechanisms to more formally define their community relationships, including environmental. Canada Port Authorities have undertaken to investigate these various measures along with other best practices to determine appropriate steps to enhance community outreach, consultation and engagement while reflecting specific local circumstances.

Canada Port Authorities could do more to support their communities with additional resources. One source of community funding is redirecting the CPAs' annual Gross Revenue Charge from Government to community investment. The amount generated is of limited value to Government, but would make a significant difference to port communities.

Port authorities support their communities in a variety of ways through investment and ensuring suitable environmental mitigation. In recognition of the efforts of CPAs, the Government should support their many community outreach and engagement initiatives. Some of the ways the Government can assist are outlined in the following recommendations.

Recommendations:

The Government should consider a more proactive role in providing direct financial assistance to port-host municipalities for capital infrastructure needs that are directly related to mitigating the impact of increased cargo movements through their communities from Canada Port Authority commodity growth. This could be achieved with the Government giving preference to or allocating extra "points" for infrastructure funding requests from port communities.

Allow each port authority to retain its Gross Revenue Charge in a controlled allotment, from which the port would invest in community-benefiting infrastructure projects as well as community and First Nations' initiatives, consistent with the strategic plan of each Canada Port Authority and with consultation with these groups. Expenditure of such funds would be reported to Transport Canada on a regular basis.

B. Environmental Sustainability

Canadians care about their environment and also care about jobs, trade and prosperity; ports have been operating within this balance for decades and have a lot at stake with the modernization of port operating frameworks.

Canada Port Authorities understand their port operations may create externalities that could harm nearby communities and affect the residents' quality of life. As a result, each CPA goes to considerable lengths to eliminate or mitigate environmental irritants. They take as many steps as possible to respond to the environmental challenges that impact their communities.

For example, the Quebec Port Authority has established an extensive citizen engagement process to optimize waterfront use and ensure its environment is protected.

With trade expected to diversify and grow and most of it to be moved by marine transportation, sustainable and enhanced port development will be essential to meet the demand for exports and imports. Also, important will be the need to ensure that development minimizes impacts to the environment and communities while assisting in the transition to a low-carbon economy. With many policy initiatives underway, from development of the trade diversification agenda to the implementation of the Government's *Oceans Protection Plan*, the ports modernization review is an opportunity to connect with these policy initiatives towards a more efficient and sustainable supply chain that will enhance trade, protect the environment, and support innovation.

At this time, it is pertinent to reiterate our concerns regarding Bill C-69, *The Impact Assessment Act*. While not directly within the purview of this review, the Bill as it currently stands proposes an unclear and unpredictable framework that could jeopardize Canada's engagement in global trade. Ambiguity in Bill C-69 due to expanded and subjective impact assessment factors, unclear methodology, unclear timelines and information requirements and significant Ministerial powers have the potential to diminish Canada's ability to build the trade-enabling port infrastructure it needs to compete. Bill C-69 and its expanded impact assessment process could prove to be the tipping point to drive investment away from Canada at a time when trade is growing and domestic infrastructure programs are not filling the funding gap. In many cases, opportunities are lost, market conditions have adapted, commodities are re-directed through other trade corridors, and terminal developers opt for developments at other North American ports before Canadian projects ever get constructed. Loss of port development can lead to loss of other benefits beyond the economic; a diminished port sector could constrict the very big role of ports as innovators and knowledge brokers, enriching communities and leading various environmental protection initiatives.

Observation:

In developing policy and regulations, the government must ensure balance between environmental protection and trade and economic development.

1. Sustainability and environmental protection

Canada Port Authorities strive to protect the environment while safely and efficiently facilitating commerce and cargo movement. All CPAs are members of Green Marine, a voluntary program and Canadian success story. Through its high standards and incentives, Green Marine recognizes leading environment protection practices by global maritime stakeholders including ports and ship owners and operators. Canadian ports are committed to a wide range of environmental protection practices, ranging from efforts to reduce shore noise and underwater noise, to the reduction of light emissions and undertaking shoreline rehabilitation efforts. Appendix D, "Environmental Programs and Initiatives" lists the many efforts undertaken by CPAs to protect the environment.

2. *Mitigation, adaptation and resilience of ports to climate change Impacts*

Marine shipping generates the least amount of CO₂ per tonne kilometer in contrast to other land modes. For example, rail carriage generates 244 percent more CO₂ per tonne-kilometer than ships, while trucks emit 562 percent more than ships.²⁵ Shipping has the potential for further emissions reduction with the many steps being taken by shipping lines to reduce their carbon footprint, such as converting to alternative fuels, potentially using sail assist, passive solar energy and so forth. Further use of the marine mode to deliver cargo can help reduce dependence on other less efficient modes, mitigate emissions and help to address climate change.

In keeping with carbon and emissions reduction targets, Canada Port Authorities are reducing carbon and other air emissions through a wide range of initiatives, such as using electric vehicles and providing shore-power to docked vessels. Shore-power, which has been installed in the ports of Vancouver, Prince Rupert, Halifax and Quebec City, allows vessels to “plug in” to shore based power and “turn off” their engines in port thereby reducing idle-generated emissions. The Port of Thunder Bay has installed solar panels to power port operations, while other ports have installed energy efficient LED lighting and conducted energy audits to identify efficiencies. Ports are investigating the safe use of electrified rubber tire gantry cranes (RTGs) to further reduce emissions.

Recommendation:

The Government should create a fund to support port infrastructure programs aimed at mitigating and offsetting greenhouse gas and carbon emissions.

While ports are working to reduce carbon and emissions, they are also adapting to the impacts of climate change on port infrastructure and through resilience planning to ensure continued operation in the event of a climatic incident or environmental disruption. Environmental changes, such as extreme and unpredictable weather patterns along with varying water levels and ice cover have had and will have a significant impact on port infrastructure. This will accelerate the need for and change the type of maintenance required in the long run. Indeed, new technologies, materials and techniques are being developed for port infrastructure ranging from climate resilient concrete mixes to innovative pier design. In the short term, establishing response and communications plans with local communities, agencies and jurisdictions that can be activated when a crisis occurs is also key to ensuring port and marine commerce resilience.

Recommendation:

The Government should clarify and facilitate linkages among departments, agencies and stakeholders involved in developing resilience and responding to climate change induced incidents.

3. *Environmental planning, consultation and community engagement*

A major role of Canada Port Authorities is land use planning and development. In this role, they have developed extensive skills and abilities and have successfully conducted impact assessments and developed port lands, using the lenses of sustainability, First Nations and community. A balanced approach to port development that acknowledges and keeps the existing experience and capacity of ports in conducting project impact assessments within transparent, predictable timelines is essential for appropriate port development.

Recommendation:

Recognizing that many CPA's have extensive capacity and experience in conducting project impact assessments, they should continue to retain the CEAA 2012, section 67 delegation to conduct such assessments. CPAs that do not have such capacity should have access to CEAA-certified capacity to assist in carrying out this function.

Environmental protection is a key responsibility for Canada Port Authorities. Ports strive to focus on the environmental consequences of port operations and activities through the lens of sustainability, First Nations, and resource development. Canada Port Authorities understand the importance of responding to the challenges of climate change and the need to reduce greenhouse gas emissions.

While the stage has been set for growth, Bill C-69 proposes an unclear and unpredictable framework that could jeopardize Canada's engagement in global trade.

VI. Port Safety and Security

In 2015, ACPA released a White Paper on security at Canada Port Authorities entitled: *Strengthening Security at Canadian Port Authorities* (Appendix B). The white paper was the result of extensive consultation with CPAs to determine the needs and solutions to enhance port safety and security. Highlighting limitations CPAs face in enforcing security as well as addressing security gaps, the white paper served as the basis of ACPA's efforts to address these issues with Transport Canada, the Royal Canadian Mounted Police, Public Safety, and Canada Border Services Agency. The white paper's recommendations still stand, and are broadly focused on:

- reviewing and rectifying the disconnect between the port security requirements of the *Canada Marine Act* (CMA) and the *Contraventions Act* (CA)
- clarifying CPAs' role in providing waterside security
- establishing authorities for CPA security enforcement, and
- ensuring appropriate information sharing among marine related agency partners

Over 2017, ACPA has been making progress, through close collaboration with Transport Canada's Centre for Enforcement Excellence, to standardize and deliver training to port security personnel and issue security credentials. The Association of Canadian Port Authorities will be working through 2018 within this forum on regulatory changes as part of a longer-term phase two approach to improving the authorities and tools for CPAs to manage port security. This process has begun with a partnered survey of current port security needs and identification of the potential linkages between the *Canada Marine Act* (CMA) and the *Contraventions Act* (CA).

On the growing matter of cybersecurity, ACPA participated in a Transport Canada led survey of cybersecurity capacity at the CPAs in 2013. As cybersecurity has evolved within the marine domain, ACPA will be working with Transport Canada, the Canadian Coast Guard and Public Safety to ensure that CPAs are reflected in national strategies and that port authorities are properly supported in their cybersecurity monitoring and response.

Recommendations:

Transport Canada should:

- *develop a ports' self-assessment guide for ports' cyber-security efforts (including guidelines for risk assessments, staff training, IT systems),*
- *outline specific insurance requirements,*
- *develop steps for assessing for data loss and physical loss, and*
- *develop processes for assessing third party systems and security.*

Transport Canada in partnership with Canada Port Authorities should establish a Working Group to develop cyber-security guidelines and priority projects related to the shipping sector, including:

- *developing a risk-based approach to cyber-security,*
- *guidelines for cyber-security during port calls,*
- *plans and procedures for response and recovery after an attack,*
- *common training modules,*
- *insurance issues and coverage and,*
- *connectivity to other pan-Canadian cyber-security plans and processes.*

The Government should give consideration to unique financial security burdens imposed on Canada Port Authorities situated at or near border crossings (such as Windsor Port Authority).

VII. Port Governance

The Ports Modernization Review offers an opportunity to improve Canada Port Authority operations, including governance. While the current governance model under the *Canada Marine Act* is working well, there is room for improvement, particularly given the evolution of CPAs over the past two decades and their evolving role in facilitating integrated supply chain efficiencies.

As part of the Review, Transport Canada is undertaking an external study of port governance. While this external study will provide guidance to the Minister of Transport on port governance improvements, it is essential that the study consider the following recommendations.

A. Boards of Directors

As discussed previously in chapter II C, timeliness of Board appointments is a critical issue that requires rapid resolution. Board and User Group fatigue, lost candidates, and semi-populated Boards hinder the ability of CPAs to effectively complete their mandates. Further, with supply chains that stretch increasingly further away from port boundaries, national perspectives must be woven into Board deliberations. As such, the geographic area from which nominees can be drawn should be extended to reflect each port's economic hinterland. The composition of the Board should be reviewed to ensure nominees and appointments reflect the evolving nature of CPAs as trade enablers, data managers and supply chain integrators. Further, it is essential that the best governance principles are adopted and implemented by CPA Boards.

One important tool for ensuring an effective board is the competencies matrix established by each Board of Directors. The competency matrix ensures that the right combination of technical skills (accounting, legal, human resource management, engineering, etc.) and behavioural competencies are present to support the port authority's strategic plan. Adhering to the discipline of the competencies matrix when making board appointments is therefore critical.

Recommendations:

The Government of Canada should ensure a faster Board appointment process, by allowing no more than 6 months to elapse between when the nominations are presented and the appointments are confirmed.

All Board appointments should strictly adhere to the Board of Directors candidate requirements as defined within their approved competencies matrix.

The Government should respect the work of the User Group Nominating Committees by:

- *addressing their nominations in a timely manner, and*
- *appointing User Group candidates from the lists provided by the User Group Nominating Committees, in concordance with the port authority's Board-approved competencies matrix.*
 - *In instances where the government seeks nominees from outside of the lists provided, the government should seek the input of the port authority CEO regarding the proposed candidates.*

To encourage a national, supply chain-wide perspective in CPA planning, Board nominees should include nominations from within each port's broader economic hinterland.

Through mechanisms such as appointment letters, the Government should support all Canada Port Authority Boards of Directors in adopting the full range of governance best practices.

B. Amalgamation / Inter- and Intra-regional Collaboration

Canada Port Authorities recognize there are operational efficiencies to be gained from individual ports collaborating, both within a region and between regions. The notion of “amalgamation” can reflect a wide variety of approaches, ranging from informal collaboration agreements to regional partnerships to full-scale, formal amalgamation among port authorities.²⁶ There is a strong rationale from a trade development perspective and overall transportation efficiencies for increased coordination among port authorities, and greater port collaboration and alignment is of national interest. As such, CPAs should be encouraged by Government to pursue collaborative approaches as much as possible to take advantage of port complementarities.

Canada Port Authorities have had considerable discussion on the issue of port amalgamation and offer the following observation.

Observation:

Any formal amalgamation among port authorities can only be directed by Transport Canada. Any decision should be guided by competitiveness and efficiency gains imperatives and be consistent with the self-sufficiency principles that guide all port authorities. Collaboration and/or amalgamation should reflect a National Transportation Strategy and trade-related systems approach. The approach taken should ensure the ability of ports to remain agile and responsive to trade opportunities and local community needs.

Nonetheless, room must be provided for enhanced collaboration to evolve organically in response to commercial potential. Seed funding to support such collaborative explorations would be helpful.

Recommendation:

Develop a fund to provide small-scale seed funding for a port and its partners to investigate pilot projects that could benefit from collaborative approaches, such as shared cargo opportunities, complementary land-side storage sites and so forth.

VIII. List of Recommendations and Observations

Land and Acquisition and Disposal

1. *The Federal Government should extend to all Canada Port Authorities greater decision making authority to acquire and dispose of land, in accordance with each Port Authority's Board-approved business plan, and subject to Board of Directors approval, without requiring amendments to their Letters Patent.*

Transport Canada should develop realistic, short timelines for completion of remaining Letters Patent Amendments, and adhere to these timelines. Suggestions to simplify and streamline the Letters Patent amendment process include:

- *undertaking reviews among various departments in parallel, rather than in sequence*
 - *developing a flowchart that establishes the process that amendments will follow, with checklists and periodic "windows" into the status of the application. This will provide port authorities with insight on what step in the process their application is at and the length of time remaining for completion*
 - *working with Canada Port Authorities, establish appropriate criteria for, and implement a fast track process to address high priority requests within an expedited timeframe*
2. *Transport Canada should establish a Ports Advocate within Transport Canada with the direct responsibility to support and help expedite Canada Port Authorities' applications for Letters Patent amendments and Board appointment processes.*
 3. *Ports' regulatory framework should ensure port authorities are more expressly empowered, as part of their core mandate, to engage in trade-facilitation activities, notwithstanding the primary mode of transportation, which may include logistics facilities, inland ports and supply-chain related uses.*

Financial Flexibility

4. *Canada Port Authorities require flexibility to capitalize subsidiaries without constraints, such as a cap on earnings. Therefore, the Government should remove the calculation for investment in a subsidiary, and allow investment limits to be determined by the commercial market.*

Allow port authorities to hold a partial equity stake in a Special Purpose Entity or Joint Venture where the main activities are related to port operations or to support port operations. This will enable Canada Port Authorities to share the risks, but also share the rewards of business development activities.

Amend the Canada Marine Act to allow a client to become a guarantor for a port project.

The federal government should provide loan guarantees for infrastructure projects of all sizes. Funds received from other programs such as the Canada Infrastructure Bank and the Quebec Maritime Strategy should be excluded from the calculation for port borrowing limits.

5. *The Government of Canada should establish a fund to assist Canada Port Authorities in rehabilitating legacy infrastructure in support of defined commercial and trade development needs.*
6. *Revise the current procedure for establishing borrowing limits so that limits are determined by commercial financial institutions, or by using criteria similar to those of commercial financial institutions, with a capped timeline that must be met.*
OR
In lieu of borrowing limits, the Government should establish minimum credit ratings and/or reasonable debt servicing metrics for each CPA to achieve and maintain, and permit borrowing within normal market ranges.

Expediting Board Appointments

7. *The Government of Canada should ensure a faster Board appointment process, by allowing no more than 6 months to elapse between when the nominations are presented and the appointments are confirmed.*

All Board appointments should strictly adhere to the Board of Directors candidate requirements as defined within their approved competencies matrix.

The Government should respect the work of the User Group Nominating Committees by:

- *addressing their nominations in a timely manner, and*
- *appointing User Group candidates from the lists provided by the User Group Nominating Committees, in concordance with the port authority's Board-approved competencies matrix.*
 - *In instances where the government seeks nominees from outside of the lists provided, the government should seek the input of the port authority CEO regarding the proposed candidates.*

National Transportation Strategy

8. *Transport Canada, working with Global Affairs Canada / Trade Diversification, should develop a National Transportation Strategy that identifies and validates priority trade corridors and gateways that are responsive to the Canada Marine Act's guiding principles.*

The resulting strategy would then enable the Federal Government to bring sharper focus to port investment and development initiatives. In addition, and within that Strategy,

the government must create identified industrial centres and transportation corridors, and protect the land associated with those centres and corridors for those uses.

Tiered Policies and Regulations

9. *Recognizing that port authorities have evolved such that “one size does not fit all”, Transport Canada should develop tiered sets of policy tools and instruments based on Canada Marine Act principles and port size to meet the diverse needs of Canada Port Authorities and their regional and local contexts.*

Economies of Scale and Technology

10. *Transport Canada should establish a joint “Future Visioning” group with Canada Port Authorities to define future logistics/transportation and trade diversification innovations and identify emerging trends and needs.*

In support of the above, Transport Canada should conduct research on the future of shipping for Canadian Ports with an emphasis on key questions:

- *what will evolving import/export channels look like?*
- *where is sector growth predicted?*
- *what opportunities/challenges will ports face over the next 10 years?*

This research should be shared with all CPAs and related marine stakeholders, and a mechanism should be established to implement the vision as developed by the group.

New Frontiers in Data Management

11. *Canadian Port Authorities undertake to establish a working group focused on common efforts in developing technology to support supply chain efficiency. The Joint Working Group would be responsible for developing a digital road map with prioritized projects and support an industry-wide adoption of innovative technologies. Transport Canada and Canada Border Services Agency must be active participants in that working group. Transport Canada should establish an appropriate technology fund to advance prioritized projects identified by the Joint Working Group.*

Transport Canada should continue to expand access to data across all port authorities and other stakeholders in the supply chain, with the goal of bringing all players to the same level of utilization.

Government should ensure continued, long-term funding support for Transport Canada’s Data Initiative, as this project is essential for continued efficiencies in Canada’s ports and supply chains.

Observation:

Given the critical role that Canada Border Services Agency plays in facilitating the movement of cargo, the Agency must become an active participant in exploring and adopting new technologies, appropriate data sharing with ports and supply chain partners, more rapid clearance procedures and so forth.

Workforce of the Future

12. *Government must develop a system or set of programs to incentivize young workers to seek employment in the transportation sector.*

Government should leverage the “partnership hub” capacity of Canadian Port Authorities – ports can play a pivotal role as conveners of regional and local workforce discussions, bringing together the port community with education and training providers and labour unions to identify current gaps and future needs, leading to workforce education and training plans.

Where desired, and subject to the individual capabilities of each port, Canada Port Authorities should be supported in becoming living laboratories for university / college / labour union / knowledge pilot projects. This step could include a regional approach to joint labour /supply chain projects.

Where desired, and subject to the individual capabilities of each port, Canada Port Authorities should be supported in creating incubator facilities for marine transportation-related projects, either through the allocation of physical space or through financial or in-kind support for the initiatives.

Issues and Challenges – Relationships with Indigenous Peoples

13. *The Government must clarify the meaning and application of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in the Canadian context, particularly as it relates to what constitutes **consent** versus **engagement** in the port authority environment. This must focus on process guidance, not outcomes guidance, and must take into account the regional variations in CPA relationships with their First Nations communities.*
14. *With respect to First Nations presence on CPA Boards, direction should be given to Board Nominating Committees to seek appropriate First Nations candidates, in concordance with each CPA’s Board-approved strategic plan and skills matrix, in ports where this is appropriate.*

Enhancing Community Relations

15. *The Government should consider a more proactive role in providing direct financial assistance to port-host municipalities for capital infrastructure needs that are directly related to mitigating the impact of increased cargo movements through their communities from Canada Port Authority commodity growth. This could be achieved with the Government giving preference to or allocating extra “points” for infrastructure funding requests from port communities.*

Allow each port authority to retain its Gross Revenue Charge in a controlled allotment, from which the port would invest in community-benefiting infrastructure projects as well as community and First Nations’ initiatives, consistent with the strategic plan of each Canada Port Authority and with consultation with these groups. Expenditure of such funds would be reported to Transport Canada on a regular basis.

Environmental Sustainability

Observation:

In developing policy and regulations, the government must ensure balance between environmental protection and trade and economic development.

16. *The Government should create a fund to support port infrastructure programs aimed at mitigating and offsetting greenhouse gas and carbon emissions.*
17. *The Government should clarify and facilitate linkages among departments, agencies and stakeholders involved in developing resilience and responding to climate change induced incidents.*
18. *Recognizing that many CPA’s have extensive capacity and experience in conducting project impact assessments, they should continue to retain the Canada Environmental Assessment Act, 2012, section 67 delegation to conduct such assessments. CPAs that do not have such capacity should have access to CEAA-certified capacity to assist in carrying out this function.*

Port Safety and Security

19. *Transport Canada should:*
- develop a ports’ self-assessment guide for ports’ cyber-security efforts (including guidelines for risk assessments, staff training, IT systems),*
 - outline specific insurance requirements,*
 - develop steps for assessing for data loss and physical loss, and*
 - develop processes for assessing third party systems and security.*

Transport Canada in partnership with Canada Port Authorities should establish a Working Group to develop cyber-security guidelines and priority projects related to the shipping sector, including:

- *developing a risk-based approach to cyber-security,*
- *guidelines for cyber-security during port calls,*
- *plans and procedures for response and recovery after an attack,*
- *common training modules,*
- *insurance issues and coverage and,*
- *connectivity to other pan-Canadian cyber-security plans and processes.*

The Government should give consideration to unique financial security burdens imposed on Canada Port Authorities situated at or near border crossings (such as Windsor Port Authority).

Boards of Directors

20. *The Government of Canada should ensure a faster Board appointment process, by allowing no more than 6 months to elapse between when the nominations are presented and the appointments are confirmed.*

All Board appointments should strictly adhere to the Board of Directors candidate requirements as defined within their approved competencies matrix.

The Government should respect the work of the User Group Nominating Committees by:

- *addressing their nominations in a timely manner, and*
- *appointing User Group candidates from the lists provided by the User Group Nominating Committees, in concordance with the port authority's Board-approved competencies matrix.*
 - *In instances where the government seeks nominees from outside of the lists provided, the government should seek the input of the port authority CEO regarding the proposed candidates.*

To encourage a national, supply chain-wide perspective in CPA planning, Board nominees should include nominations from within each port's broader economic hinterland.

Through mechanisms such as appointment letters, the Government should support all Canada Port Authority Boards of Directors in adopting the full range of governance best practices.

Amalgamation / Inter- and Intra-regional Collaboration

Observation:

Any formal amalgamation among port authorities can only be directed by Transport Canada. Any decision should be guided by competitiveness and efficiency gains imperatives and be consistent with the self-sufficiency principles that guide all port authorities. Collaboration and/or amalgamation should reflect a National Transportation Strategy and trade-related systems approach. The approach taken

should ensure the ability of ports to remain agile and responsive to trade opportunities and local community needs.

21. *Develop a fund to provide small-scale seed funding for a port and its partners to investigate pilot projects that could benefit from collaborative approaches, such as shared cargo opportunities, complementary land-side storage sites and so forth.*

IX. List of Appendices (provided as separate documents)

Appendix A: 2012 White Paper: “Strengthening the Canada Port Authorities – Key Enablers of Canadian Trade”

Appendix B: 2017 White Paper: “Modernizing Canada’s PILT Act: Rectifying the PILT Act to resolve outstanding Canada Port Authority concerns”

Appendix C: “Community Relations and Outreach Programs and Initiatives”

Appendix D: “Environmental Programs and Initiatives”.

X. Endnotes

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- ²⁰ Press release (2018), “Temporary Halt of Activities at the Pointe-aux-Basques Terminal”, Sept-Îles Port Authority, October 19
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- ²⁴ InterVistas (2017), *National Port System: Economic and Social Impact*, Association of Canadian Port Authorities, Ottawa

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²⁶ Perhaps the most formal recommendation comes from the Port Alberni Port Authority (PAPA). This is detailed in the PAPA submission.