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Introduction

Canada’s major trading ports in British Columbia are points of entry to the vast market of Pacific Ocean trade. British Columbia must ensure that these Pacific ports are a key component of an efficient, reliable and competitive port system. ¹ By developing this British Columbia Ports Strategy, we will contribute to sustained economic growth.

British Columbia’s and western Canada’s economic policies have created an investment-friendly business climate. Economic growth continues to be robust, reflecting solid employment gains, near record lumber prices, higher energy and mineral prices, sustained housing activity and stronger retail sales. Expansion of port capacity is needed to handle this continued growth and will contribute to B.C. reaching its full economic potential.

A working partnership between our ports and the federal and provincial governments will ensure that the British Columbia port system can respond to the opportunities created by unprecedented growth in containerized traffic to and from China and other Asia-Pacific countries, and expected growth in cruise and bulk traffic through our ports.

Investment in port expansion and new infrastructure development will come from many private and public sources. Governments have an important role in catalyzing these significant capital projects.

To give this port development a rolling start, the British Columbia Government has already taken action, providing:

- $2.5 million property tax relief for port terminal operators to stimulate new investment;
- $400 million investment in road infrastructure in the Lower Mainland which will benefit port traffic;
- significant investment for strategic port development including $17 million to create new container handling capacity at the Port of Prince Rupert;
- $2.5 million support for the development of British Columbia as a cruise destination.

These investments confirm that the development of the Pacific Gateway as the most competitive international trade hub on the North American west coast is a top priority of the Government of British Columbia. In addition, as part of the province’s BC Rail initiative, Canadian National is investing about $15 million on improvements to its northern rail line to Prince Rupert.

The western provinces have made a joint submission to the federal government under the Canada Marine Act review process. These provinces are also developing a Western Canada Transportation Strategy.

The British Columbia Ports Strategy sets out the following vision and objectives for 2020.

¹ See glossary for a definition of the port system.
**Vision**

“British Columbia is a leading gateway for Asia-Pacific trade and has the most competitive port system on the west coast of the Americas.”

Achieving this vision will enable the port system to contribute an additional $6.6 billion each year in economic output to the Canadian economy by 2020, with $4.7 billion occurring in British Columbia.

By 2020, British Columbia’s port system will have:

- **An international reputation for a secure, world class port system**, with exemplary service performance from dockside to customer.
- **State-of-the-art port terminals** that use an appropriate mix of technology and people.
- **The needs of industry and local communities in balance** while preserving the environment and ensuring safety and security.
- One consistent **region-wide approach to infrastructure planning and development** with integration across the entire supply chain, avoiding duplication and overlap.
- **A common policy approach across all levels of government** that treats the port system as a strategic asset and economic generator, stimulating investment.
- **A growing, productive and prosperous workforce.**

**Goal and Objectives**

The British Columbia Ports Strategy has one broad goal, supported by three main objectives:

**2020 Goal:**
All port system partners are working together to maximize trade traffic and economic growth opportunities for British Columbians and Canadians.

**Objective 1:**
Maximize Asia-Pacific container traffic growth opportunities.

**Objective 2:**
Maximize export and regional growth opportunities.

**Objective 3:**
Maximize B.C.’s position as a world cruise destination.

The benefits of British Columbia’s leadership in developing this strategy will be felt across Canada. However, to fully realize the vision, there is much to do. The British Columbia Ports Strategy is about defining the needs, and recognizing the possibilities, of today and the potential of tomorrow. It’s about all partners working together to build the most competitive port system on the west coast of the Americas.

The provincial government invites all the partners involved in the British Columbia port system to join us as we move forward. Now is the time for action.
A Time for Action

BC’s Ports Are Vital to Future Economic Growth and Prosperity

Canada’s prosperity depends upon its success in world trade. British Columbia’s ports make this trade possible. They handle half of Canada’s maritime exports and 85% of the western province’s marine exports from grain, coal and forest products to petroleum and petrochemicals.

The B.C. port system currently handles about $35 billion a year in trade and contributes approximately $4 billion annually in economic output to the Canadian economy, $3 billion of which occurs in British Columbia.

As gateways to the Asia-Pacific region, B.C. ports will continue to be critical to the economic future of Canada and British Columbia. China, the province’s largest offshore trading partner, accounts for 60% of the growth in world trade and is a major driving force of trade expansion, particularly for container traffic. Asian markets also offer major growth opportunities for resource exporters and manufacturers across western Canada (see Exhibit 1).

Capturing these opportunities will result in significant economic benefits to B.C. and Canada (see Exhibit 2). By 2020, B.C.’s port system will be able to handle about $75 billion in trade and contribute approximately $10.5 billion in economic output every year to the Canadian economy, with $7 billion of this accruing to British Columbia.2

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2 Based on economic impact analysis by Colledge Transportation Consulting Inc.

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Exhibit 1: Traffic Growth Highlights

The combined traffic growth for the Port of Vancouver, Fraser Port and Port of Prince Rupert is expected to be:

Exhibit 2: 2020 Economic Benefits

The estimated economic benefits for B.C. and Canada from achieving the 2020 port traffic projections for resource exports, the container trade and cruise are:

The corresponding employment benefits of achieving the 2020 vision are:

- B.C.: growth in direct jobs of 178%, from 18,000 jobs to 50,000 jobs and growth in wages from $1.0 to $2.7 billion annually 3
- Canada (including B.C.): growth in direct maritime jobs of 173%, from 26,000 jobs to 71,000 jobs and growth in wages from $1.4 to $3.8 billion annually

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3 Figures represent direct jobs related only to international trade activities at ports.
The Challenges Ahead

The B.C. port system faces several fundamental challenges:

- **Major traffic growth**
  B.C. port container traffic demand is expected to *quadruple* by 2020 and has already triggered the need for more than $1.5 billion in terminal developments in the province. Is this enough? Which ports should make these investments?

- **Capacity limitations**
  The rapid growth in traffic is already putting pressure on the ports system. Shippers have serious concerns about the condition, capability and future reliability of ports, road and rail services and infrastructure. What are the infrastructure expansion priorities and how can BC ports attract private sector funding? How can under-utilized routes be better used?

- **Port customers demand competitive service and prices**
  Strong competition exists among global supply chains to attract customers, and transportation is increasingly important in buying decisions. How can B.C. ports improve their competitive position to retain existing business and attract new business?

British Columbia Ports Strategy

Although several of Canada’s major trading ports are located in B.C., these gateways and their connecting continental road and rail networks are fundamentally important to our economic fortunes. They serve western Canadian exporters and make possible import and export trade with central Canada and the United States. Broad consensus exists that greater system-wide co-ordination is urgently needed to ensure B.C.’s ports can grow in response to market forces. Unless B.C.’s port system can meet and keep pace with future growth challenges huge opportunities in world trade will be missed. Success or failure in B.C. will be felt across Canada.

In this context and in recognition of the significant economic role of the port system to the provincial and national economy, the provincial government developed this Ports Strategy.

The *British Columbia Ports Strategy* presents a vision for the port system in 2020, its opportunities and challenges and the goals and strategies needed to achieve the vision. The strategy outlines what all partners need to do to position the ports system to maximize trade and economic growth opportunities for B.C. and Canada.

The strategy is based on extensive research and consultation (see Appendix A). Its main supporting research documents—a *British Columbia Ports Competitiveness Profile* and the *Technical Analysis*—provide the most current trans-Pacific trade outlook available to 2020, including port traffic projections, a complete picture of the North American west coast port market, shipping industry and technology trends and the regulatory/policy environment affecting the ports system.

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4 Prepared by Colledge Transportation Consulting Inc. and associated consultants.
B.C.’s Port System

**British Columbia’s Ports**

With 135 public and private ports, British Columbia is a maritime province. The main trading ports—Port of Vancouver, Fraser Port and Port of Prince Rupert—account for more than 95% of the international trade moving through the B.C. port system. Many other ports such as Squamish, Powell River, Kitimat and Stewart play important roles in the resource economy (see Exhibit 3).

The main trading ports are Canada Port Authorities (CPAs) and these fall under federal jurisdiction. Under the Canada Marine Act (CMA), the federal government owns the port lands and infrastructure of six CPA ports in the province but leaves administration to local authorities.

The CMA was introduced to allow ports to be more responsive to market opportunities. The Port Authorities provide port infrastructure (e.g., vessel berths) and lease terminal sites to private operators.

**The Partners**

The port system is highly dependent upon several partners. In addition to the federal government, these are:

- **private terminal operators** – own and operate terminals for passengers and cargo
- **railways** - the major carriers are Canadian National (CN), Canadian Pacific Railway (CPR) and U.S.-based Burlington Northern Santa Fe (BNSF). CN and CPR are federally regulated and all of the major carriers have extensive continental networks that link ports to inland markets (see Exhibits 4 and 5)
- **other carriers** - shipping/cruise lines, truck and tugboat operators
- **labour (union, non-union)** - longshore, railway, trucking, etc.
- **local governments** - provide and maintain local roads and other community services and regulate use of municipal lands
- **provincial government** - has regulatory control over land use (except federal lands) and owns majority of riverbeds and port sea beds. The one exception to this is the Port of Vancouver.
- **western provinces** - B.C. ports are strategic assets for the flow of western provincial exports

**Pacific Coast “Gateway” Role**

The majority of international port cargo flows through the heavily used southern gateway that includes the Port of Vancouver and Fraser Port. The Port of Vancouver is the largest export port in North America by tonnage and handles about 90% of the combined cargo of the three main ports.

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**Exhibit 3: International Traffic Profile**

<table>
<thead>
<tr>
<th>Canada Port Authorities</th>
<th>tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraser Port: autos, forest products, general cargo, containers</td>
<td>6,200,000</td>
</tr>
<tr>
<td>Nanaimo: forest products</td>
<td>616,000</td>
</tr>
<tr>
<td>North Fraser: forest products, aggregates</td>
<td>domestic</td>
</tr>
<tr>
<td>Port Alberni: forest products</td>
<td>100,000</td>
</tr>
<tr>
<td>Prince Rupert: forest products, coal, grain, general cargo, cruise</td>
<td>3,400,000</td>
</tr>
<tr>
<td>Vancouver: coal, grain, potash, sulphur, forest products, containers, cruise</td>
<td>66,700,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Private/Public Harbours</th>
<th>tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campbell River: dry bulk, forest products</td>
<td>1,000,000</td>
</tr>
<tr>
<td>Crofton: forest products</td>
<td>800,000</td>
</tr>
<tr>
<td>Kitimat: dry/liquid bulk, forest products</td>
<td>2,200,000</td>
</tr>
<tr>
<td>Powell River: forest products</td>
<td>400,000</td>
</tr>
<tr>
<td>Squamish: forest products</td>
<td>800,000</td>
</tr>
<tr>
<td>Stewart: dry bulk, forest products</td>
<td>200,000</td>
</tr>
<tr>
<td>Victoria: cruise</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Source: *B.C. Ports Competitive Profile*, data mainly for 2003. Private/public harbours include some domestic cargo.
Exhibit 4: B.C. Port System Multimodal Network

Legend
- Canada Port Authority Ports
- Other Significant Ports
- CN
- BC Rail
- CPR
- Southern Railway
- BNSF
- Highways

Vancouver Area Ports
- Vancouver Port Authority
  - Navigational Jurisdiction
  - Proprietary Jurisdiction
- North Fraser Port Authority
- Fraser River Port Authority

BC Port Traffic
- International Exports: 70 - 80 million tonnes/year
- International Imports: 10 - 11 million tonnes/year
Vancouver also serves as one of the two major homeports for the Alaska cruise business, the other one being Seattle. Fraser Port is Canada’s largest automobile port and also handles large volumes of other cargo moving within British Columbia - some 30 million tonnes in 2003.

The northern gateway is the Port of Prince Rupert. Prince Rupert has traditionally handled coal, grain and forest products exports and has well advanced plans to convert its Fairview site into a container terminal. The relatively underutilized northern route has significant potential to absorb future trade growth.

**Gateway Competition**

B.C. port terminals compete for the container business with ports throughout North America. The main competitors are the Ports of Seattle, Tacoma, Oakland, and Los Angeles-Long Beach. In 2003, the Los Angeles-Long Beach complex ranked third in the world container trade.

Competition for bulk commodity exports is confined to U.S. Pacific Northwest ports such as Portland. There is limited U.S. port competition for break-bulk cargoes.
Context

**Significant Trends**

The trends shaping the B.C. port system and their significance are:

**Cargo traffic growth**

Significant growth is expected in most sectors (see Exhibit 6). Container trade in B.C. is projected to grow at 6 to 8% annually to 2020 resulting in a 200 to 300% traffic increase. Traffic growth already puts significant pressure on inland road and rail networks. Concerns also exist about B.C.’s future ability to service break-bulk cargoes because of the market pressure to convert traditional terminal sites to container operations.

**Rise of containerized shipping**

World container port traffic grew by more than 750% between 1980 and 2003, from 35 to 302 million twenty-foot equivalent units (TEU). The main reasons are the continuing shift of break-bulk cargoes into containers and the rapid globalization of manufacturing, much of which has shifted from North America to Asia. Containerized traffic is now a permanent feature of ocean shipping.

**North American market growth**

Currently only about 7% of B.C.’s inbound containers move to the United States. The U.S. market, particularly the Midwest, provides a growth opportunity for the B.C. port system.

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5 See also Appendix B for more details.

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### Exhibit 6: Growth Outlook and Traffic Summary for Major Trading Ports

<table>
<thead>
<tr>
<th>Resource Exports through B.C. Ports, million tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break-bulk</td>
</tr>
<tr>
<td>Petroleum</td>
</tr>
<tr>
<td>Sulphur</td>
</tr>
<tr>
<td>Potash</td>
</tr>
<tr>
<td>Grain</td>
</tr>
<tr>
<td>Coal</td>
</tr>
<tr>
<td>2020</td>
</tr>
<tr>
<td>2003</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Container Imports/Exports, million TEU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
</tr>
<tr>
<td>2003</td>
</tr>
<tr>
<td>2010</td>
</tr>
<tr>
<td>2020</td>
</tr>
</tbody>
</table>

* B.C. ports share of Pacific coast container traffic

Note: B.C. ports share of Canada’s container trade grew from 29% in 1995 to 50% in 2003

### Traffic Summary

<table>
<thead>
<tr>
<th></th>
<th>2003</th>
<th>2020</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Break-bulk</td>
<td>9</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Dry bulk</td>
<td>47</td>
<td>47 – 75</td>
<td>0 – 60</td>
</tr>
<tr>
<td>Liquid bulk</td>
<td>6</td>
<td>9</td>
<td>50</td>
</tr>
<tr>
<td>Cruise</td>
<td>0.9</td>
<td>1.4 – 2.4</td>
<td>50 – 150</td>
</tr>
<tr>
<td>Containers million TEU</td>
<td>1.8</td>
<td>5.2 – 7.1</td>
<td>200 – 300</td>
</tr>
</tbody>
</table>

1. million tonnes  
2. million revenue-passengers

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6 Source: *B.C. Ports Competitive Profile*, combined traffic for the Port of Vancouver, Fraser Port and Port of Prince Rupert. Petroleum includes petrochemicals. Projections based on mid-point of high-low range.
**Increases in ship size**
The largest container ships at the Port of Vancouver today are about 8,000 TEU. The largest post-Panamax vessels that are the new shipping standard now exceed 8,000 TEU with a potential size of up to 12,000 TEU. Presently about 300 ships make up the post-Panamax fleet with another 120 ships exceeding 8,000 TEU on order. To maximize the efficiency of large ships, shipping lines call at fewer ports with a larger number of containers. This puts pressure on inland transportation systems to increase efficiency and on ports to expand terminals.

**Inland terminal growth**
In recent years, retailers have developed inland regional distribution centres that receive containerized import goods for warehousing and distribution to retail facilities across wide areas. These distribution centres tend to locate in or near major ports and in large urban areas. Such distribution functions in the greater Los Angeles area create a major advantage for the Southern California ports. Strategic distribution centres are slowly developing in the Greater Vancouver area and will likely continue to evolve in Canada. They require suitable land areas and efficient intermodal network connections.

**Increased competition for skilled labour**
With the continued high growth in transportation demand and workforce attrition due to retirements and competition among different industries for skilled labour, the supply of labour to meet future needs will be a priority in all phases of port system planning and expansion efforts.

**Cruise traffic growth**
Despite the recent decline in the Port of Vancouver’s cruise traffic (the first such decline in 20 years), the long-term prospects are promising due to the worldwide popularity and subsequent growth of cruising. Several port communities including Vancouver, Victoria, Nanaimo, Campbell River, Port Alberni and Prince Rupert are advancing long-term cruise growth strategies.  

**Opportunities and Strengths**

**Container trade**
B.C. container port traffic demand is anticipated to increase from 1.8 million TEU today to 5 to 7 million TEU by 2020. This would give B.C. ports a 15% market share by 2020 compared to the existing 9% share. To meet this growth, port authorities in B.C. are planning more than $1.5 billion in container terminal development (see Appendix C for port-specific projects).

The Port of Vancouver requires at least one major container terminal project by 2010 to meet projected capacity needs. At Fraser Port, the capacity is growing with demand. Another terminal is possible to respond to niche demand. The proposed terminal at the Port of Prince Rupert would add 1.2 million TEU by 2009. Achieving 15% market share of the Pacific North America container trade is possible with these developments. More aggressive terminal expansion could drive market share to 16 to 17%, or 8.3 to 8.8 M TEU by 2020.

**Non-containerized cargoes**
Significant opportunities in several commodities, for example, coal (China demand), minerals, petrochemicals, value-added agriculture and forest products and oil and gas, are due in part to improved prices and increased production.

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7 Further information is available in the recently released “The Contribution of the International Cruise Industry to the Canadian Economy in 2003”. Copies can be downloaded from the North West Cruiseship Association site at www.nwcruiseship.org
Economic development
Port development will support regional and national economies that rely on ports for resource exports and import-export trade. These activities contribute to economic development across Canada. There are also opportunities in the cruise sector for several coastal communities.

Container terminals in particular have the potential to spur regional economies. Since manufactured goods rely on container shipping, the existence in a region of a container terminal can encourage the development of secondary manufacturing.  

8 Further information is available in Transport Canada’s recent report entitled “Estimating the Economic Impact of the Canadian Marine Transport Industry”.

Competitive Environment and B.C. Port System Performance

The competitive global business environment means container line port customers have an unprecedented degree of choice. Transportation and infrastructure are part of a decision to buy and that decision is based on value over the entire supply chain. Fierce competition exists among global supply chains to attract customers.

All major U.S. west coast ports have ambitious port-inland infrastructure projects underway and there is no intrinsic long-term shortage of container terminal capacity. Therefore, port limitations and urban pressures in large U.S. cities on the west coast will not, in themselves, drive traffic to B.C. ports. Success depends on developing sufficient and reliable capacity in Canada, at a competitive cost.

Shipping lines prefer calling at U.S. ports because of the large size of the local markets and the incentives offered by the ports and municipalities to develop the container business (Exhibit 8).

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### Exhibit 7: B.C.’s Port System Strengths

- deep, natural harbours with good rail links to North America
- shorter voyage distances/times between Asia and North America compared with U.S. ports
- a ports model that combines the long-term perspective of a public agency with market forces and commercial principles to drive efficient infrastructure planning
- productive terminals and willingness to adopt new technology

... will benefit many partners

<table>
<thead>
<tr>
<th>Partner</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ports/terminal operators</td>
<td>Commercial success</td>
</tr>
<tr>
<td>Transport carriers</td>
<td>Commercial success</td>
</tr>
<tr>
<td>Shippers</td>
<td>Commercial success</td>
</tr>
<tr>
<td>Labour</td>
<td>Employment growth and well-paying jobs</td>
</tr>
<tr>
<td>Local governments</td>
<td>Vibrant communities and economic wealth</td>
</tr>
<tr>
<td>Provincial governments</td>
<td>Sustained economic growth and regional development</td>
</tr>
<tr>
<td>Federal government</td>
<td>Fulfill international trade and Canadian economic growth objectives</td>
</tr>
</tbody>
</table>

### Exhibit 8: Canada-U.S. Port Comparison

<table>
<thead>
<tr>
<th>Ports are local government agencies and viewed as a requirement for industrial support</th>
<th>No explicit recognition of the importance of marine transport to the economy in our National Marine Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>ready access to local government funding</td>
<td>different property tax regimes</td>
</tr>
<tr>
<td>raise taxes for port development</td>
<td>pay stipends to federal government</td>
</tr>
<tr>
<td>direct federal investment</td>
<td>no federal investment</td>
</tr>
<tr>
<td>tax-exempt municipal bond financing</td>
<td>taxable market debt financing</td>
</tr>
<tr>
<td>federal government investing in port security</td>
<td>limited federal investment in port security</td>
</tr>
</tbody>
</table>

---
In order to keep prices competitive, service providers in all parts of the supply chain must keep input costs in check. **B.C. ports must compete on price and level of service.**

Shown below are the main factors affecting port selection and B.C.’s performance for each.

**Exhibit 9: Port Selection Factors**

<table>
<thead>
<tr>
<th>Factor</th>
<th>B.C. Ports System “Scorecard”</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Market:</strong> Size of the local/inland continental markets and availability of distribution centres for major retailers</td>
<td>Limited size of Canadian market – beyond port control</td>
</tr>
<tr>
<td><strong>Labour:</strong> Adequate supply of trained workforce.</td>
<td>No competitive advantage although some concerns about stability</td>
</tr>
<tr>
<td><strong>Terminals:</strong> Price, space, equipment, productivity</td>
<td>Productive by west coast standards although U.S. has greater access to financing</td>
</tr>
<tr>
<td><strong>Inland Networks:</strong> Road and rail links between ports and markets/production centres</td>
<td>Network connections, but U.S. leads in developments</td>
</tr>
</tbody>
</table>

**Major Challenges**

The major challenges for the port system are:  

- Maintaining the existing system while expanding capacity and ensuring capability and reliability to meet future demand
- Funding infrastructure expansion
- Enhancing competitiveness

Within each of these areas there are inter-related issues.

**Coordinating development**

In a region so dependent upon trade, there is little coordination in western Canada of port terminal and inland road and rail infrastructure development. Nor is there a system-wide development approach across supply chain partners or among different port authorities. The result: over or under-utilized infrastructure, missed opportunities and the potential for duplication of investments.

An inability to balance supply and demand creates negative and lasting perceptions among users who experience service problems and/or increased costs. Without integrated planning that recognizes the interdependency and maximizes the efficiency of B.C. ports and transportation corridors, customers will opt for other more efficient port gateways.

**Protecting the environment**

With the unprecedented growth expected in British Columbia’s port system comes an increased need to manage the environment for the long-term. This includes mitigating environmental impacts from increases in domestic and international traffic at port facilities and the need to meet standards of air and water quality set by all levels of government. The implementation of key port expansion and development priorities must include actions that ensure growth does not come at the expense of local or provincial environmental sustainability objectives, and involve the cooperation of all partners in the B.C. port system.

**Accommodating the growth**

Previously, container volume gains were accommodated because capacity was in place well in advance of the demand. Today, some parts of the system are at or near capacity and the growth in container traffic is accompanied by growth in virtually all other commodities sharing parts of the system. The principal challenges are:

- **Optimizing the existing system** - operational and other changes needed to improve efficiency.

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9 Individual port concerns are provided in Appendix D.
- Capacity expansion - the ability of ports, terminals, railways and governments (roads) to develop appropriate infrastructure.

- Infrastructure funding - the ability of ports, terminals, railways and governments to fund infrastructure improvements and land acquisitions.

- Land availability - land use conflicts between industrial and other needs and the availability of land adjacent to port areas and along transport corridors to accommodate future expansion.

- Property taxation - balancing the needs of the transportation industry for a more competitive industrial land property taxation regime with the needs of local governments that derive a major proportion of their revenues from property taxes.

- Security costs - Canadian industry’s ability to meet and pay for the high security standards being set by the U.S.

Attracting private sector investment
The Canada Marine Act (CMA) and rail access under the Canada Transportation Act (CTA) are two immediate policy areas impacting the ability to attract private sector capital on the scale required to finance major infrastructure expansion.

The CMA also does not permit the Government of Canada to invest directly in marine infrastructure or other important functions such as maintenance dredging of navigation channels. In addition, the requirement for CPAs to pay a stipend to the federal government to provide a return for the use of real property is a drain on the capital reserves of CPAs and impacts their ability to invest.

The second policy area concerns rail “open access” where one railway may be required to accept another railway operating and soliciting traffic on its tracks as a measure to increase competition. Some shippers and others made strong calls during the formal CTA review process to change the Act to permit “open access.” To date, legislation resulting from the review has not been tabled. But, this issue must be resolved expeditiously because it will impact private sector decisions to make hundreds of millions in new capital investments in the rail network across Canada.

Meeting workforce and technology needs
Ensuring that the B.C. port system attracts an adequate supply of trained workers is an important competitive issue. A key priority is to identify the future workforce needs given the projected volume and mix of business (e.g. bulk, containers, cruise). There also needs to be a willingness to change work practices and to adopt the right mix of technology and people to improve productivity.
**Risks**

Failure to address the above opportunities and challenges will result in:

- **Lost opportunities** - B.C. would miss the chance to reach a 15% share of the west coast container market by 2020. Each percentage point in container market capture in 2020 is worth approximately $250 million a year in GDP and 4,000 jobs.

- **Economic and business losses** - potential loss of manufacturing, mining, forestry, agriculture, petroleum and petrochemical business that depends on the ports system to ship products in extremely competitive world markets.

- **Reduced export earnings** - loss of economic wealth.

- **Erosion of B.C.’s gateway status** - a diminished international status would have long-term effects since lost business is very difficult to regain.
British Columbia Ports Strategy

2020 Goal & Objectives

The British Columbia Ports Strategy has one fundamental goal: all port system partners are working together to maximize opportunities for British Columbians and Canadians.

To achieve this goal, partners will need to focus on:

Objective 1: Maximize Asia-Pacific container traffic growth opportunities.

Objective 2: Maximize export and regional growth opportunities.

Objective 3: Maximize B.C.’s position as a world cruise destination.

2020 Economic Benefits

The estimated direct economic and employment benefits of achieving these objectives for Canada and for British Columbia by 2020 are evident in Exhibit 10 (note that Canadian benefits include B.C. benefits).

Reaching these objectives will increase direct Canadian port system employment from 26,000 to 71,000 jobs by 2020, an increase of 173%. The majority of these new jobs would accrue to B.C. for an employment gain of 32,000 jobs (up from 18,000 to 50,000 jobs). These are well-paying jobs that would create annual wage benefits of $1.7 billion to B.C.’s economy.

To put this growth in perspective, it is roughly equivalent to the number of jobs in B.C.’s wood product manufacturing sector today. The corresponding annual increase in direct economic output for Canada is approximately $6.6 billion (constant 2004$), a gain of 170% ($3.9 billion in 2003 vs. $10.5 billion in 2020). About $4.7 billion of this additional output will occur in British Columbia.

Specifically, the majority of the economic benefits are anticipated to arise from the container sector. This can be seen in Exhibit 10 (Objective 1) where Canadian economic output could increase to $6.5 billion by 2020 out of the total output of $10.5 billion (2020 Goal). The corresponding B.C. figures are $4.6 billion by 2020 for containers alone versus a total gain for all cargoes and cruise of $7.4 billion.

The implication is that aggressively pursuing a container development path for B.C. ports would propel this sector from approximately one-third of the province’s current port-related economic contribution to about two-thirds by 2020.

Key Benchmarks

Exhibit 11 provides performance benchmarks that would have to be met in order to achieve each objective. Benchmarks for the first three objectives are based on the high-end traffic growth projections for resource exports and cruise and a B.C. ports container market share of 17% of total Pacific west coast traffic by 2020. The tonnage targets for Objective 2 include break-bulk, bulk and liquid bulk exports and correspond with the growth outlook presented in Exhibit 6.
Exhibit 10: B.C. Ports Strategy Estimated Direct Economic Benefits Summary (constant 2004$, Canadian benefits include B.C.)

**Objective 1: Maximize Asia-Pacific container traffic growth opportunities**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1.4</td>
<td>0.5</td>
<td>0.6</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>6.5</strong></td>
<td><strong>2.4</strong></td>
<td><strong>3.0</strong></td>
<td><strong>43,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+365%</td>
<td>+380%</td>
<td>+400%</td>
<td>+380%</td>
</tr>
</tbody>
</table>

**ECONOMIC BENEFITS – to British Columbia**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1.0</td>
<td>0.4</td>
<td>0.4</td>
<td>6,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>4.6</strong></td>
<td><strong>1.7</strong></td>
<td><strong>2.1</strong></td>
<td><strong>30,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+360%</td>
<td>+325%</td>
<td>+425%</td>
<td>+400%</td>
</tr>
</tbody>
</table>

**Objective 2: Maximize export and regional growth opportunities**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>2.0</td>
<td>0.7</td>
<td>0.9</td>
<td>13,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>2.8</strong></td>
<td><strong>1.0</strong></td>
<td><strong>1.3</strong></td>
<td><strong>18,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+40%</td>
<td>+43%</td>
<td>+44%</td>
<td>+38%</td>
</tr>
</tbody>
</table>

**ECONOMIC BENEFITS – to British Columbia**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>1.4</td>
<td>0.5</td>
<td>0.6</td>
<td>9,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>2.0</strong></td>
<td><strong>0.7</strong></td>
<td><strong>0.9</strong></td>
<td><strong>13,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+43%</td>
<td>+40%</td>
<td>+50%</td>
<td>+44%</td>
</tr>
</tbody>
</table>

**Objective 3: Maximize B.C.’s position as a world cruise destination**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>0.5</td>
<td>0.2</td>
<td>0.2</td>
<td>4,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>1.2</strong></td>
<td><strong>0.4</strong></td>
<td><strong>0.5</strong></td>
<td><strong>10,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+140%</td>
<td>+100%</td>
<td>+150%</td>
<td>+150%</td>
</tr>
</tbody>
</table>

**ECONOMIC BENEFITS – to British Columbia**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>0.3</td>
<td>0.1</td>
<td>0.2</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>0.8</strong></td>
<td><strong>0.3</strong></td>
<td><strong>0.4</strong></td>
<td><strong>7,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+167%</td>
<td>+200%</td>
<td>+100%</td>
<td>+133%</td>
</tr>
</tbody>
</table>

**2020 Goal: All port system partners working together to maximize trade traffic and economic growth opportunities**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
<th>Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>3.9</td>
<td>1.4</td>
<td>1.7</td>
<td>26,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>10.5</strong></td>
<td><strong>3.8</strong></td>
<td><strong>4.8</strong></td>
<td><strong>71,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+170%</td>
<td>+171%</td>
<td>+182%</td>
<td>+173%</td>
</tr>
</tbody>
</table>

**ECONOMIC BENEFITS – to British Columbia**

<table>
<thead>
<tr>
<th></th>
<th>Output $B</th>
<th>Wages $B</th>
<th>GDP $B</th>
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</thead>
<tbody>
<tr>
<td>2003</td>
<td>2.7</td>
<td>1.0</td>
<td>1.2</td>
<td>18,000</td>
</tr>
<tr>
<td><strong>2020</strong></td>
<td><strong>7.4</strong></td>
<td><strong>2.7</strong></td>
<td><strong>3.4</strong></td>
<td><strong>50,000</strong></td>
</tr>
<tr>
<td><strong>Gain</strong></td>
<td>+174%</td>
<td>+170%</td>
<td>+183%</td>
<td>+178%</td>
</tr>
</tbody>
</table>

Source: derived from “Port of Vancouver Economic Impact Study” by InterVistas Consulting Inc. Figures were adjusted to include Fraser Port and Port of Prince Rupert traffic. All figures reflect direct impacts only and exclude indirect and induced impacts. The economic impact data is based on surveys of economic activity at, and associated with, the Port of Vancouver in 2000 that estimated about 70% of employment, output and GDP related to port activity take place in B.C. This 70% figure has been used to estimate the B.C. portion of the projected economic gains for 2020.

Note: variances in the B.C. and Canadian percentage gains shown for each goal are mainly due to rounding effects.
The benchmarks for the 2020 Goal correspond to the port terminal and rail system capacity that will be required to realize the first three goals. For example, a total of 9 million TEU in container terminal capacity will need to be in place by 2020, about 50% greater than the expansion projects being planned today.

### Strategies

To achieve the 2020 vision, industry, labour and all levels of government will need to focus on the core challenges:

- expanding system capacity, capability and reliability,
- infrastructure funding, and
- enhancing competitiveness.

Therefore, a three-part strategy has been formulated:

- **Capacity expansion** - to ensure that B.C.’s port system has the infrastructure and inland networks in place to meet growth opportunities.
- **Competitiveness** - to ensure that B.C.’s port system is competitively positioned to attract growth and investment.
- **Marketing** - to ensure that B.C. ports are internationally recognized as leading gateways for Asia-Pacific trade. This includes a public relations component.

### Capacity Expansion

Capacity expansion addresses the challenges related to providing and paying for physical infrastructure across all modes. The capacity expansion strategies reflect two main thrusts – to provide highly coordinated planning, and to implement infrastructure developments by:

- optimizing use of the existing system capacity, and
- building new capacity.
Actions

1) Create a management entity to coordinate activities in the west coast ports system
To make B.C. the preferred gateway for customers and to coordinate the expansion of ports system capacity, the western provincial governments and federal government should consider establishing a management entity for the west coast ports system. This body would provide a single point of contact for partners and stakeholders and the necessary western perspective to coordinate planning across the supply chain. It would also send a strong message to the Asia-Pacific community that Canada is addressing the challenges and ensure that the western region is maximizing the economic value of its port system.

It should be based on win-win solutions for ports and supply chain partners while preserving competitive choices for customers. The entity would have the geographic scope to make best use of B.C.’s various coastal port assets and could provide a vehicle to assist regional and remote port development. It would also have the “critical mass” to allow a cost-effective means of funding priority infrastructure projects and investments.

One possible interim step towards region-wide coordination is amending the CMA to permit CPA mergers where there is a business case.

2) Develop a ports multimodal action plan
The plan is critical to identify: 1) immediate and long-term priorities for infrastructure development and public-private sector investment across the system; 2) when these developments and investments must take place to facilitate trade traffic growth opportunities; and 3) the cost and availability of funding sources.

3) Create a ports/transportation corridor land reserve
To ensure long-term access to suitable lands in support of B.C.’s port system development, a land bank should be created in conjunction with local and regional land use plans. In the meantime, allowances could be made for non-port system land uses (e.g. light industrial or recreational uses).

4) Review “best” operating practices and potential for application
Given the major cost and investment risks of building new infrastructure, operational improvements are increasingly important. As a step towards optimizing existing infrastructure and equipment, a review of “best” operating practices should be carried out and the results compared with existing operations to identify possible network operating indicators (performance targets) and operating alternatives.

5) Create a trade traffic database
A secure and accessible traffic database should be created as a planning, workforce needs and marketing tool for the B.C. port system. This could provide B.C. the competitive advantage of having the only complete picture of the west coast container and export trade.

Desired Outcomes

- Creation of an interim advisory group by spring 2005 to examine options for a west coast ports management entity by 2008.
- An increase of 30% in B.C.’s southern corridor transcontinental main line rail capacity and services by 2008.
- A Multimodal action plan by spring 2005 resulting in strategic ports, rail and road infrastructure investments of approximately $4 billion by 2020.
Competitiveness

Given the competitive challenges from the U.S. port system and other global supply chains, it is essential that B.C. create a competitive port framework that is founded on providing superior value. B.C.’s future success will depend on encouraging private sector investment and reinvestment in port system infrastructure to stay competitive. A healthy investment climate will foster continuous port system improvements and innovation that will allow B.C. to compete more strategically. It will also serve as a catalyst for sustained regional economic growth by attracting business investment to western Canada. Building a more competitive ports system will, however, need to be done in a collaborative way taking into account the interests of all stakeholders.

Actions

1) Address CMA limitations
Immediate implementation of western coalition recommendations to amend the CMA as follows:
- improving access to capital
- lowering the cost of capital
- eliminating stipend payments to the federal government
- allowing direct federal investment in port infrastructure when in the national interest
- addressing the financial viability concerns of CPA ports.

This action will help ensure adequate private sector investments are made and ease the financial burden on smaller CPA ports. It is also intended to address viability issues facing smaller CPA ports.

2) Resolve the rail “open access” issue
The rail “open access” issue must be resolved because it may affect future railway capital investment in the ports system. If main line rail capacity is not expanded in major corridors, the growth targets for containers and other non-containerized cargoes will be at risk. The western provinces, railways and federal government should make resolving this issue a top priority.

3) Develop a port system competitiveness policy
A competitiveness policy for the port system should be developed. A key focus of this policy should to create a stronger partnership between the ports system and the provincial and local governments, including opportunities to share in the wealth generated from future growth. This policy should be integrated across all levels of government and should include a range of competitive issues such as:
- taxation
- investment incentives to stimulate economic growth
- infrastructure financing options
- expediting environmental and permitting approvals for development projects

4) Promote development of smaller ports
In recognition of the important role of non-CPA ports in regional development and to maximize the use of port infrastructure throughout the province, planning and development assistance should be provided. This may be facilitated through a WCPA and/or provincial and federal funding assistance for research and development.

5) Implement leading-edge technologies
Research and analysis should be carried out to identify new technologies to increase the productivity of the B.C. port system based on the appropriate mix of technology and human resources. This will ensure that customer needs are met and instill a long-term perception in the
international shipping community of B.C. as an ultra-modern, efficient and competitive gateway.

6) Develop an integrated human resource plan
A comprehensive human resource plan that identifies long term solutions for the BC ports system to support human resource and operations planning. Gaps should be identified between identified needs and existing and future supply to determine system requirements. The inventory would be a key consideration in developing a long-term workforce supply and training and re-training program.

Desired Outcomes
- Canada’s pacific port system is recognized as the most competitive and secure gateway in North America.
- An integrated provincial and national port system competitiveness policy.
- CMA changes adopted in legislation in 2005.
- Resolution of the rail “open access” issue in the medium term.
- Increase in B.C. port container terminal productivity by 50% by 2020 (a 3% annual improvement).
- Adequate long-term supply of skilled labour.

Public Relations and Marketing

The marketing strategy is intended to elevate Canada’s international reputation as the premiere west coast ports gateway for trade and tourism. It leveres the West Coast Ports Authority concept by marketing B.C. as one gateway and highlights the collaborative approach being taken by the western provinces, federal government and other partners to support the growth of its port system. This will enhance the international image of B.C. as a reliable and efficient gateway for moving trade traffic to and from North America and create broader long-term investment opportunities for the province.

Actions

1) Develop a coordinated public relations plan
A public awareness campaign should be developed to raise the profile and understanding among Canadian citizens about the importance of the ports system and the economic wealth that it generates for the country. The plan needs to identify communication tools and critical, shared messaging that can be used by all partners.

This campaign will build community support for freight transportation system investments to the benefit of the regional economy, as well as help manage stakeholder expectations. It will also foster a greater appreciation of what is required to continue developing the system and the important role that governments and communities can play in supporting this development.

2) Develop a marketing action plan
A detailed marketing plan is required to establish the various marketing activities, key messages, target audiences and communications strategies. This action plan should focus on two important aspects:
- retaining and attracting shippers by promoting the advantages of the B.C. gateway.
- an investment attraction strategy based on the competitive advantages and efficiency of the western ports system.

These steps will benefit B.C. and Canada by increasing international trade and stimulating investment.
3) Develop and implement an international marketing campaign
Consideration should be given to creating a B.C. *ports system* brand identity as a key component of a marketing campaign. The objective is to build international awareness of B.C.’s strengths as a maritime trading province to attract business, investment and human resources.

**Desired Outcomes**

- Canada has an elevated international status as the leading west coast gateway, resulting in increased shipments, travel and investment.
- Public recognition about the importance of the ports system as an economic generator.
## Implementation

The action items from the previous section are shown in Exhibit 12 in terms of an implementation timetable and the partnerships required.

### Exhibit 12: Implementation Timetable and Key Partnerships

<table>
<thead>
<tr>
<th>Strategic Area</th>
<th>Timing</th>
<th>Key Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Short (by end 2005)</td>
<td>Lead</td>
</tr>
<tr>
<td></td>
<td>Medium (2006-2010)</td>
<td></td>
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<tr>
<td></td>
<td>Long (2011 +)</td>
<td></td>
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<tr>
<td><strong>Capacity Expansion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Create a BC ports system management entity</td>
<td></td>
<td>Prov/industry</td>
</tr>
<tr>
<td>Develop a ports multimodal action plan</td>
<td></td>
<td>Provincial government</td>
</tr>
<tr>
<td>Create a ports/transport corridor land reserve</td>
<td></td>
<td>Ports / railways</td>
</tr>
<tr>
<td>Review “best” operating practices/alternatives</td>
<td></td>
<td>Industry</td>
</tr>
<tr>
<td>Create a trade traffic database</td>
<td></td>
<td>WCPA</td>
</tr>
<tr>
<td><strong>Competitiveness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address CMA limitations</td>
<td></td>
<td>Ports</td>
</tr>
<tr>
<td>Resolve rail “open access” issue</td>
<td></td>
<td>Railways, prov. gov’t</td>
</tr>
<tr>
<td>Develop a port system competitiveness policy</td>
<td></td>
<td>Provincial government</td>
</tr>
<tr>
<td>Promote development of non-CPA ports</td>
<td></td>
<td>WCPA, Provincial gov’t</td>
</tr>
<tr>
<td>Implement leading-edge technologies</td>
<td></td>
<td>Industry / labour</td>
</tr>
<tr>
<td>Develop an integrated human resource plan</td>
<td></td>
<td>BCMEA / labour / gov’t</td>
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<tr>
<td><strong>Public Relations and Marketing</strong></td>
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<tr>
<td>Develop a coordinated public relations plan</td>
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<td>Provincial gov’t/industry</td>
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<tr>
<td>Develop a marketing action plan</td>
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<td>Provincial gov’t/industry</td>
</tr>
<tr>
<td>Develop international marketing campaign</td>
<td></td>
<td>Provincial gov’t/industry</td>
</tr>
</tbody>
</table>

Note 1 - other parties might include shipping lines, Canada Customs, railways, and shippers
**Conclusions**

A *B.C. Ports Strategy* is an important step towards managing significant Asia-Pacific traffic growth opportunities on the horizon for British Columbia and Canada. It provides a foundation for building a more competitive, reliable and efficient port system that will elevate British Columbia’s world status.

British Columbia’s international reputation as an attractive gateway for future trade, tourism and investment will depend on the ability of all port system partners to address the challenges and opportunities ahead. If Canada and British Columbia do not take action now, the losses will be felt for years to come.

**Growth Opportunities**
- Trade: 200-300% growth in container traffic
- Tourism: 50-150% growth in cruise traffic
- Regional development

**Key Challenges**
- Expanding system capacity, capability and reliability to meet demand
- Funding infrastructure expansion
- Competitiveness

**Goal & Objectives**

**2020 Goal:** All port system partners are working together to maximize trade traffic and economic growth opportunities

**Objective 1:** Maximize Asia-Pacific container traffic growth opportunities

**Objective 2:** Maximize export and regional growth opportunities

**Objective 3:** Maximize B.C.’s position as a world cruise destination

**Strategies**

- Capacity expansion/funding
- Competitiveness
- Marketing

**Annual Direct Economic Benefits to British Columbia in 2020**
- $7.4 B in output (vs. $2.7 B today, an increase of 174%)
- $3.4 B in GDP (vs. $1.2 B today, an increase of 183%)
- 50,000 jobs (vs. 18,000 today, an increase of 178%)

**Annual Direct Economic Benefits to Canada in 2020**
- $10.5 B in output (vs. $3.9 B today, an increase of 170%)
- $4.8 B in GDP (vs. $1.7 B today, an increase of 182%)
- 71,000 jobs (vs. 26,000 today, an increase of 173%)
GLOSSARY OF TERMS

B.C. Port System: The B.C. port system is a multimodal transportation network that includes:

- Six Canada Port Authority (CPA) ports that are part of the National Ports System and many other public/private harbours under local administration
- Port terminals
- Transcontinental railways in Canada and the U.S. (e.g. CN, CPR, Burlington Northern Santa Fe)
- National highway system and other regional and local roads

The Vancouver International Airport also plays an important role in the cruise and air freight sectors.

Bulk: Dry or liquid cargo that is transported without packaging. Such cargoes are usually handled by specialized bulk terminals and shipped in vessels such as dry bulk carriers and tankers. Examples include coal, potash, sulphur, grain (some grains are containerized) and liquid bulk products such as petroleum and petrochemicals. Canadian bulk cargoes are exported around the world.

Break-bulk: Cargo handled in individual units such as bales of pulp or rolls of newsprint.

Containerized cargo: Cargo that is handled in uniform containers and usually of a relatively high value. Examples include: machinery and equipment, food items (sometimes using refrigerated containers), iron and steel alloys, wood pulp, lumber and agricultural items such as grain products and feed.

Economic output: The gross value of the services provided which roughly corresponds to the gross revenues collected by businesses involved in the ports supply chain.

GDP: Gross domestic product – the value of all goods and services produced domestically by a nation. GDP = private consumption + investment + public spending + change in inventories + exports – imports.

Post-Panamax ships: Vessels too large to transit the Panama Canal.

Supply/logistics chain: An inter-connected and integrated transportation and distribution system that connects suppliers with customers and includes transportation and handling, warehousing and inventory management. Supply chains today are worldwide in scope.

TEU: Twenty-foot equivalent unit – a measure of container traffic based on the physical length of a container. Therefore, a forty-foot container would be 2 TEU.
APPENDICES
Appendix A
Organizations Consulted

Senior-level representatives were consulted from the following organizations.

**Ports/Port Communities**

District of Campbell River, Fraser River Port Authority, Greater Victoria Harbour Authority, Kitimat Economic Development Office (and Port Advisory Committee of City Council), Nanaimo Port Authority, Port Alberni Port Authority, Prince Rupert Port Authority, Squamish, Town of Stewart, Vancouver Port Authority

**Port Terminals/Operators**


**Labour**

International Longshore and Warehouse Union

**Transportation Carriers/Logistics Providers**

BC Ferries, CN, Canadian Pacific Railway, Evergreen, Rivotw, Seaspan, Zim-American Israeli Co. Inc.

**Shippers**

ALCAN, Canadian Wheat Board, Eurocan Pulp & Paper (Kitimat), Methanex Corporation, Norske Skog Canada Limited, Prince Rupert Grain Ltd., Western Pulp Limited Partnership

**Governments**

Province of Alberta (Alberta Economic Development and Alberta Infrastructure and Transportation), Province of British Columbia (various ministries), Government of Canada (Transport Canada and Western Economic Diversification), Greater Vancouver Regional District, Union of BC Municipalities and a number of local governments including the City of Vancouver, City of Prince Rupert, the Corporation of Delta, and the City of Richmond.

**Associations**

BC Maritime Employers Association, BC Trucking Association, Greater Vancouver Gateway Council, Northwest Cruiseship Association, Northwest Corridor Development Corporation
## Appendix B
### Key Trends

<table>
<thead>
<tr>
<th>Trend</th>
<th>Measure</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Port Traffic Trends</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Container demand growth | ● Projected annual growth 2003 – 2020: 5 - 6% for West Coast U.S. & Canada 6 - 8% for B.C. ports  
● Growth first half 2004: 6.7% for West Coast; 9.2% for B.C. ports | ● pressure on port terminal, road and rail capacity  
● each 1% in market capture is worth $250 m/year (GDP) and 4,000 jobs |
| Export growth in bulk products (coal, potash, sulphur, grains) | ● Projected growth rate 2003-2020: 0% - 3%  
● Growth first half 2004: 4.0% for coal, potash & sulphur; 116% for grains | ● need to preserve terminal capacity for traditional cargoes  
● pressure on inland rail capacity shared by containers and bulk |
| Cruise growth | ● 2003 revenue-passengers: 1 million  
● 2020F: 1.4 to 2.4 million | ● long-term potential for B.C.-based itineraries  
● need community tourism capacity and infrastructure |
| Oil and gas potential | ● Minor existing marine trade in crude oil & petroleum products - Port of Vancouver  
● Several hydrocarbon projects proposed  
● Construction of pipeline from AB to northwest B.C. is projected to increase crude oil tonnage through northern ports by 50 million tones/annum by 2020.  
● Crude oil/petroleum traffic through Port of Vancouver likely to double by 2020. | ● decline in domestic U.S. production of petroleum/natural gas promises growth in waterborne cargo – need infrastructure to support |
| **Shipping Trends: A Drive for efficiency** | | |
| Bigger container ships | ● current vessel size (Vancouver area): 3,300 – 6,000 TEU  
● post-Panamax fleet about 300 ships; 119 ships of over 8,000 TEU on order and largest about 9,500 TEU  
● Potential size:17,000 TEU | ● shipping lines call at fewer ports with larger number of containers  
● pressure on port and terrestrial systems to increase efficiency  
● pressure on land areas to expand terminal sites including the shifting of cargo and transport assembly functions inland away from congested and costly port lands |
| More productive terminals | ● B.C. and West Coast U.S. ports now at lower end of world productivity scale, typically 1,000 TEU /metre of berth/ year  
● Best world practices (Asia, Europe) achieve 2,500 TEU/m/year  
● Potential for productivity increase with existing technology; new terminal technology & automation to continue | ● adopt latest technology to reduce unit costs and turnaround time of ships |
| Longer, heavier trains | ● Existing length 12,000 feet  
● Longer trains under consideration | ● longer sidings and yards  
● more productive train loading required  
● higher traffic density lowers unit costs & improves network competitiveness |
| **Workforce Trends** | | |
| Labour shortage | | ● ability to meet future demand  
● access to skilled labour is a key constraint to growth in the sector |
### Appendix C

#### Planned B.C. Container Terminal Projects

<table>
<thead>
<tr>
<th>Port</th>
<th>Facility</th>
<th>Scope</th>
<th>Approx. Value Millions $</th>
<th>Capacity, TEU Current</th>
<th>Capacity, TEU Expanded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fraser Port</td>
<td>Fraser</td>
<td>2 cranes, intermodal yard, trackage</td>
<td>190</td>
<td>250,000</td>
<td>415,000</td>
</tr>
<tr>
<td>Surrey</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vancouver</td>
<td>Centerm</td>
<td>2 cranes, yard equipment, trackage</td>
<td>130</td>
<td>350,000</td>
<td>720,000</td>
</tr>
<tr>
<td>Vancouver</td>
<td>Vanterm</td>
<td>2 cranes, facility improvements</td>
<td>46</td>
<td>350,000</td>
<td>550,000</td>
</tr>
<tr>
<td>Deltaport</td>
<td>Deltaport</td>
<td>1 crane, 3rd berth</td>
<td>250</td>
<td>850,000</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Fairview</td>
<td></td>
<td>Phase 1: 3 cranes, berth</td>
<td>140-200</td>
<td>0</td>
<td>400,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phase 2: 3 cranes *</td>
<td>250</td>
<td></td>
<td>800,000</td>
</tr>
</tbody>
</table>

**Totals**

|                  | 1,706 to 1,766 | 1,800,000 | 5,985,000 |

* Phase 2 adds 3 cranes and 800,000 TEU, bringing the total to 6 cranes and 1.2 m TEU capacity
# Appendix D
## Individual Port Issues

The following port competitive and other issues are based on interviews with local port and community officials and other sources such as submissions to the Canada Marine Act Review Panel.

<table>
<thead>
<tr>
<th>Port Authority</th>
<th>Issues</th>
</tr>
</thead>
</table>
| Campbell River Public Harbour | • Overhead power cables with a vertical clearance of 52 metres cross Discovery Passage.  
• Tidal streams up to 16 knots on flood and ebb tides may limit navigation to slack tide periods. |
| Fraser River Port Authority | • Reservation of port land for future expansion - the limited amount of industrially-zoned waterfront land is being absorbed for other uses  
• Conflicting desires of the municipalities within FRPA’s jurisdiction and lack of long-term structure for land use and transportation development  
• Building containerized forest products, grain traffic  
• Dredging of the river for channel maintenance creates a public good in terms of flood control, but carries a cost burden for the port since the federal government no longer funds this activity (and the federal endowment fund is nearly exhausted)  
• Capacity improvements on South Fraser Perimeter Road to improve access between Fraser Surrey Docks and major Lower Mainland highways  
• Capacity improvements on Highway 99 and Blundell Rd.  
• Port security costs |
| Greater Victoria Harbour Authority | • Victoria Harbour is still in the process of divestiture. The completion of this process is required to further enable the GVHA to develop as a harbour.  
• Transportation and air travel logistics do not enable Victoria to offer cruise ships ‘home port’ status. |
| Port of Kitimat | • Concerns by port users about the level of rail service, condition and status of the CN line between Kitimat and Terrace.  
• Underutilized port and terminal infrastructure.  
• Road and rail infrastructure improvements required to access new resource areas (oil and gas, forestry, minerals, etc.). An example is the completion of the Houston-Kitimat road.  
• Need to recognize that ports such as Kitimat have a valuable role to play in the provincial economy as well as the major “gateway” ports.  
• Need for a strategy regarding preservation of provincial Crown lands for future ports use.  
• Need to support the province’s resource-producing regions as engines of economic prosperity and growth. |
| Nanaimo Port Authority | • Controlling depth at Nanaimo Assembly wharves limited due to seabed shoal.  
• Diversion of forest products cargo to other ports.  
• Limited capability to handle large cruise ships that typically run on the Alaska trade, upgrades to facilities and operations are required.  
• Property taxation. |
<table>
<thead>
<tr>
<th>British Columbia Ports Strategy</th>
</tr>
</thead>
</table>
| **North Fraser Port Authority** | • Channel maintenance involving dredging and river training is required to sustain navigation within North Fraser Port.  
• Access to main highways is indirect and requires travel through heavily traveled arterial routes of Vancouver, Burnaby and Richmond.  
• Shallow draught and bridge clearances limit traffic primarily to coastal tug and barge traffic and log booming and fishing vessels. |
| **Port Alberni Port Authority** | • Highway 4 from Parksville to Port Alberni is a winding two-lane road with a mountain pass requiring trucks to move slowly resulting in delays to other users. The road experiences significant congestion during the summer months when recreational use of the road by holiday travelers is high. Port security is a cost burden that reduces port competitiveness. |
| **Prince Rupert Port Authority** | • Developing a comprehensive long-term strategy for the northern corridor that links Prince Rupert to central Canada, the U.S. Midwest and beyond  
• Capitalize on the port’s potential to install a 100% inspection system for trains to offer high security  
• Customs cost recovery issue that could undermine the business case for the cruise and container terminals |
| **Squamish** | • Property taxes a significant burden on port revenue.  
• Relatively poor highway connection to interior of British Columbia.  
• Rail connection to the interior has a weight restriction at steep grades near Anderson Lake.  
• Diversion of BC Rail cargo to Vancouver Wharves not competitively neutral. |
| **Vancouver Port Authority** | • Improved access to large-scale capital needed for infrastructure development and land acquisitions to capture the growth opportunities  
• Positive outcome to the Canada Marine Act Review  
• Federal government funding support for required security measures  
• Reservation of port land for future expansion - the limited amount of industrially-zoned waterfront land is being absorbed for other uses  
• Road/rail access improvements at key bottlenecks  
• Long-term solution to rail service issues at terminals  
• Property taxation and land valuation |
Appendix E
Local Government Concerns

The communities that “host” port operations have legitimate interests and concerns with respect to the B.C. port system. There are a number of potential impacts, both positive and negative, that could occur from ports expansion especially considering the magnitude of the projected growth in international trade and shipping. The associated economic development opportunities that would accrue to communities from port expansion is significant; however, local government would be under increased pressure to accommodate this growth by potentially providing new lands, improving transportation links, or by expanding other related municipal services.

Local government and community concerns vary. There is a distinct contrast between northern and Lower Mainland port communities.

In the north, some facilities and operations are outside the main population centre so there are naturally fewer municipal impacts. There is also a strong desire in many northern communities to attract new industry to compensate for past economic and job losses. As an example, the Port of Prince Rupert and the City of Prince Rupert have worked cooperatively to mitigate some of the issues related to port expansion plans in that community. Although municipal concerns do exist in the north, there is a continuing impetus to maximize the economic opportunities presented by port development in Prince Rupert through ongoing collaboration and cooperation.

Port of Vancouver and Fraser River Port

In the Lower Mainland, where land is at a premium and communities are faced with competing industrial, commercial and residential interests along the waterfront and in transportation corridors, issues can continue to challenge both ports and their municipal hosts. Examples of local government concerns in the two major southwest BC ports include:

- conflicting land uses
- maintaining property tax revenues in the face of increasing demands and costs of services
- issues with land valuations, assessments and classification of industrial property
- maintaining full Payments in Lieu of Taxes (PILTS) received from Canada Port Authority ports
- mitigating the impacts of freight transportation on communities and citizens (e.g. noise, air quality, road-rail crossing safety concerns)
- maintaining the flood hazard management benefits of Fraser River maintenance dredging
- meeting critical environmental sustainability objectives and maintaining air and water quality as pressure mounts for ports’ expansion and development
- need to secure long-term commitment and funds from all levels of government to improve transportation infrastructure in support of port growth
The principal communities adjacent to each of the three major trading ports are as follows.

<table>
<thead>
<tr>
<th>Port</th>
<th>Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prince Rupert</strong></td>
<td>City of Prince Rupert</td>
</tr>
<tr>
<td><strong>Fraser River</strong></td>
<td>Richmond, Delta, Surrey, New Westminster, Coquitlam, Port Coquitlam, Pitt Meadows, Maple Ridge, Langley Townships</td>
</tr>
<tr>
<td><strong>Vancouver</strong></td>
<td>City of North Vancouver, District of North Vancouver, Vancouver, West Vancouver, Burnaby, Port Moody, Delta, Village of Belcarra, Tsawwassen First Nation (Deltaport)</td>
</tr>
</tbody>
</table>