A STRATEGIC ANALYSIS OF A CONTAINER TERMINAL

by

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Title of Thesis/Project/Extended Essay
A Strategic Analysis of a Container Terminal

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August 9, 2004
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ABSTRACT

The objective of this paper is to critically analyze the container industry, particularly focusing on how the industry relates to the Pacific North-West Ports of Vancouver, British Columbia, Seattle, Washington and Tacoma, Washington.

According to industry analysis, the container industry is a competitive one. The rivalry among the three major ports is moderate. Vancouver Port Authority, which manages the Port of Vancouver on behalf of the Federal Government, has a differentiation strategy. With this strategy, Vancouver Port Authority has managed to annually increase the container throughput at the Port of Vancouver over the last 10 years. It no longer performs the stevedoring services at its container terminals, but rather, it enters into long-term leases and berth corridor agreements with stevedoring companies. The Port of Vancouver has also attracted two global stevedoring companies to perform the stevedoring services at its three container terminals.

The Port of Vancouver is Canada’s largest and busiest port, handling over 66 million tonnes of cargo. The container operations have been the fastest growing operations at the Port of Vancouver, growing from approximately 500,000 twenty-foot equivalent containers in 1995 to over 1.54 million twenty-foot equivalent containers in 2003. Port of Vancouver’s container growth has followed a worldwide growth trend in the shipping industry. Since the development of the container industry in 1966, the percentage of global general cargo shipped in containers has grown to approximately 75%. This percentage is forecast to increase in the future.

In the recommendations, this paper argues that Vancouver Port Authority should adopt and/or continue to advocate development of an efficient Canadian logistic chain in order to attract global stevedoring companies to operate in the Port of Vancouver as opposed to the Ports of Seattle or Tacoma.
DEDICATION

This project is dedicated to my wife, Helena, and my two daughters, Catherine and Claire. The support they provided me throughout the program, and especially when writing this paper, helped me to carry on during the "dark times".
ACKNOWLEDGMENTS

I would like to acknowledge all the staff at Vancouver Port Authority who allowed me to interrupt their busy schedules to answer my endless questions. In doing so, I was able to appreciate the departments’ roles within Vancouver Port Authority, and how the departments interrelate.

I wish to thank my Mom who continually encouraged me to expand my education, whether it be through travel or study. With her support, the writing of this paper was made that much easier.

I wish to thank all the staff and professors who work for the Executive Masters of Business Program at Simon Fraser University. Their support throughout the two years made the EMBA program an enjoyable one.

Finally, I want to say “thanks” to the individuals of NEMBA 2002. I enjoyed the time we spent together over the two years. Though I will not be seeing everyone as often as I have, I will always remember the times we spent together. Cheers!!
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1 INTRODUCTION

The world container industry has been growing at a rapid rate over the last forty years and the Port of Vancouver ("POV") has mirrored that growth rate, as containerized cargo has been, over the last twenty years, the fastest growing segment at the POV. In 1995, containerized cargo totalled about 6% of the tonnage shipped through the POV. In 2003, as shown in Figure 4 - POV Container Percentage, containerized cargo totalled 19% of the tonnage shipped through the POV.

The Ports of Seattle and Tacoma, Washington are competing with the POV for the Asia and Oceania container business. However, these ports have not experienced POV's growth rate. Rather, the Port of Seattle has seen a decline in its container volumes. With the commissioning of Deltaport in 1997, VPA repatriated about 20% of the Canada bound container traffic that was originally handled at the Ports of Seattle and Tacoma. In 2001, the POV saw an increase of just 1.6% in container volume whereas Seattle and Tacoma suffered declines of 14.1% and 5.6% respectively. This decline has been attributed to the terrorist acts of September 11, 2001.

As shown in Figure 1 - Sailing Times to POV and Ports of Seattle and Tacoma, the sailing times from the pilot stations (the location where a local captain takes control of the ship and navigates the ship to the appropriate port) to the ports of Vancouver, Seattle or Tacoma are similar and so is the surrounding geography. Also, the sailing times from the major exporting countries such as China, Japan, Korea and Taiwan are approximately the same. Figure 9 - West Coast Container Traffic, in additions to the Ports of Seattle and Tacoma, lists the other ports on the west coast, such as Los Angeles, Long Beach, Oakland, Portland and San Francisco. However, in the Pacific North-West, there are only three main ports, Seattle, Tacoma and POV. Given the above, if a stevedoring company wants to obtain a presence in the Pacific North-West or to increase its existing operations, the decision to locate at one of the ports would be

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1 Deltaport is a container terminal located at Roberts Bank. Roberts Bank is a man-made peninsula, located 25 miles south of Vancouver, encompassing a container terminal, a coal terminal and an intermodal yard.

2 Vancouver Port Authority, Draft Analysis of the Competitive Position of West Coast Ports, (Vancouver: Vancouver Port Authority, September 2002) 12.

determined by looking at such factors as economical condition of the port, intermodal operations of the terminal, political stability of the country and financial incentives from the port authority, to name a few.

Figure 1 – Sailing Times to POV and Ports of Seattle and Tacoma

As shown on Figure 2 - POV Terminals, there are twenty-five terminals, three of which are container terminals. The Vancouver Port Authority ("VPA"), the entity charged with managing the POV, does not directly operate any one of the twenty-five terminals but enters into long-term leases with companies to operate the terminals. With respect to the container terminals, VPA enters into long-term leases and berth corridor agreements with stevedoring companies. The risk associated with entering into these arrangements is that at any time, a stevedoring company may go bankrupt or elect to cease operations. If this happens, VPA is left in a difficult position in locating a stevedoring company to operate the container terminal. In doing so, VPA will face the challenge of marketing the container terminal and attempting to convince the stevedoring companies, particularly global stevedoring companies, to locate their business in or to expand their business at the POV, as opposed to the Ports of Seattle or Tacoma.

This paper will focus on the issues surrounding the means by which VPA develops and markets its container terminal facilities located in the POV to stevedoring companies in light of competition from other ports. This analysis will limit the competition to the deep sea ports located on the Pacific North-West coast of North America, in particular the deep sea ports of Seattle and Tacoma.
1.1 Overview

In general, a port authority\(^4\) facilitates the delivery of goods from sea to land and vice versa. Depending on the location of a port\(^5\), a port authority may own the land, the terminals\(^6\) and the stevedoring companies\(^7\) and also be responsible for the overall management of the port.

---

\(^4\) Port Authority: entity responsible for providing the regulations governing maritime services required.

\(^5\) Port: the geographical area.

\(^6\) Terminal: part of the port, with berths, servicing a particular type of cargo.

\(^7\) Stevedoring Companies: companies that provide personnel to load and unload ships.
However, there is a trend for governments to divest themselves of ownership and to have the port authorities focus more on port management.

*Figure 3 - POV Jurisdiction*

The POV acts as a gateway for Canada's trade, travel and productivity. The proximity to the Vancouver International Airport makes international business easy to conduct as the airport has flights to most international cities and countries. The POV is Canada's largest port covering 233 kilometres of coastline, extending from Point Roberts at the Canada and United States ("US") border, through Burrard Inlet to Port Moody and Indian Arm. The physical layout of the POV is shown in Figure 3 - POV Jurisdiction. The POV is also Canada's busiest port as over

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66.7 million tonnes of cargo passed through the POV in 2003. The natural deep-water harbour allows VPA to market the POV to all shipping lines as the depth of the harbour allows for all Panamax class ships and post-Panamax class ships to enter the POV without any difficulties. A Panamax class ship is one that can fit through the locks of the Panama Canal and a post-Panamax ship is one that cannot pass through the Panama Canal.\(^{10}\) The main reason for the development of post-Panamax ships is to assist the shipping lines in lowering their costs.

### 1.1.1 VPA’s Functions

VPA has two main roles. Firstly, VPA manages the federal real property\(^{11}\) that makes up the POV. The federal real property includes both the land and water. VPA does not own the property but rather manages the federal real property on behalf of Her Majesty the Queen in right of Canada. In addition, VPA does not operate any of the twenty-five terminals located in the POV, but rather, leases the terminal to third party operators. In doing so, VPA is the landlord and the terminal operators are the tenants. VPA’s Real Estate Department manages the federal real property and they work closely with Business Development, and Container Development Departments in marketing the vacant properties. According to the Director of Real Estate for VPA, the vacancy rate for harbour-orientated lands is 3%.

In addition to managing the federal real property, VPA also performs the management function for the operation of the POV with the assistance of various departments:

- Through the Harbour Masters Department, to manage the operations of the seaways, which includes monitoring vessels’ arrivals and departures;
- Through the Security Department, to maintain a good level of security at the POV;
- Through the Environmental Department, to manage the environment;
- Through the Trade Development Department, to facilitate trade through the POV;
- Through Shore Operations, to liaise with the various stakeholders to ensure the POV functions efficiently; and,
- Through the Port Planning Department, to approve developments of VPA and its tenants.


\(^{11}\) Federal real property is the legal name of the lands that VPA manages.
1.1.2 Economic Generator v. Revenue Generator

When VPA is faced with a financial decision, for example, to lease a container terminal to a stevedoring company, VPA has to consider a challenging fiscal question: Should VPA consider the POV an economic generator for the Canadian economy or revenue generator for the Canadian Government? This is an important concept to keep in mind as US ports are viewed as economic generators, where policies continue to provide port authorities with the tools to grow economies and the faculty to compete efficiently. Since ports benefit not just the immediate area, but also the entire region and often a country, the port authority should not necessarily be trying to maximize its own profit.

The reason there is no clear answer to the question is due to the various interpretations of the Canada Marine Act ("CMA"). VPA's mission is "To facilitate and expand the movement of cargo and passengers through the Port of Vancouver in the best interest of Canadians." The mission is derived from the objectives of the CMA: "the achievement of local, regional and national social and economic objectives...." However, CMA also emphasises that each port authority has to be and "likely to remain, financially self-sufficient."

An InterVISTAS Consulting Inc.'s. 2001 report provides support for the economic generator concept. The report states that VPA is an economic generator in two senses. First, the POV creates jobs and assists towards increasing Canada's gross national product. Through VPA tenants' employees, plus all the indirect jobs relating to the POV, there are approximately 27,000 jobs associated with the operation of the POV. The wages that are associated with these jobs is approximately $1.3 billion annually. In addition to the wages, the POV contributes

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14 Canada Marine Act, 1998, c.10, An Act to amend the National Harbours Act, the Government Harbours and Piers Act, the Harbour Commission Act, the Canada Shipping Act and the Fishing and Recreational Act.


approximately $1.6 billion to Canada’s gross national product. Secondly, since the POV has the necessary infrastructure linking Canada’s domestic market to the world, it is a facilitator of other major sectors of Canada’s economy. This latter statement fits appropriately with VPA’s mission that it must develop the POV in the best interest of Canadians in order to protect the franchise of the port. However, the development may or may not be most commercially viable in the short term and may also not be self-sufficient.

The revenue generator concept comes from the terms under the CMA. Under the CMA, VPA’s investment must be fully cost recoverable. VPA must function as an independent business entity. VPA does not pay income tax but rather VPA is mandated to pay a federal gross revenue charge\(^\text{17}\) to its shareholder, the Government of Canada. Also, VPA does not have direct access to federal funding as no payment may be made under an appropriation by the Federal Government to enable VPA to discharge a liability or an obligation. VPA has to pay any and all obligations through its own funds.

With respect to the economic versus revenue generator issue, presently, VPA’s stance is that the POV should be considered an economic generator. VPA President and Chief Executive Officer, Caption Gordon Houston, is quoted in a VPA’s press release as follows:

This country was built on its ability to get products from the middle of country to tide water so that it could sell those products abroad. And it has worked perfectly well. We should recognize that the port works for the betterment of the economy and the benefit of everyone\(^\text{18}\).

1.1.3 Borrowing Requirements

Debt financing is allowed up to the borrowing limits as stipulated in VPA’s letters patent\(^\text{19}\) ("LP"), which is presently set at $225,000,000. VPA must employ market-based financing, borrowing to support capital investment from private sector lenders based on VPA’s

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\(^{17}\) The gross revenue charge is determined based on a standard formula. In general, the more revenue earned, the higher the amount of the stipend.


\(^{19}\) Letters patent are the governing documents of the VPA.
future streams of revenue. Though VPA can borrow funds, the LP places a few restrictions on the funding, such as inability to pledge federal real property, restrictions on VPA’s ability to engage in non-marine activities, and federal gross revenue charge takes priority over commercial loans. As discussed later, these types of restrictions put VPA at a competitive disadvantage with respect to the Ports of Seattle and Tacoma.

1.1.4 Types of Terminals at the POV

Figure 2 - POV Terminals provides a list of the terminals in the POV. Through the terminals, a variety of goods enter and leave the POV on an annual basis. The goods are broken down into the following categories:

- Bulk: handles goods such as coal, grain, sulphur, potash and liquids;
- General (also called as Break Bulk): handles goods such as wood pulp, lumber, and steel;
- Container: handles goods such as wood pulp, lumber, animal feed, and specialty grains; and
- Cruise: handles cruise ships and passengers.

The main difference between break bulk and container cargo is that in the latter, the goods are placed into containers. The volume of containerized trade is often measured in terms of twenty-foot equivalent units or “TEUs”\(^{20}\). In measuring container volume as compared to the other Pacific Northwest Ports, TEU is used to determine the volume of foreign destined containers entering and leaving the ports. The rationale is discussed in further detail in Section 2.2.

Presently, bulk cargo is the mainstay of the shipments through the POV, accounting for 76% of shipments. Figure 4 - POV Container Percentage provides a detailed breakdown of the percentage of tonnage each sector delivers through the POV.

\(^{20}\) Long 133.
Figure 4 - POV Container Percentage

Figure 5 - Container Traffic at POV shows the volume of TEUs through the POV, which has grown from approximately 500,000 TEUs in 1995 to approximately 1.54 million TEUs in 2003. A more detailed discussion of the container forecast is described in Section 1.5 Container Destination.
1.2 History of the POV

The POV was first established on June 13, 1792 when Captain George Vancouver entered Burrard Inlet. Up to recently, the entity that managed the POV had been a department of the Federal Government. However, the Federal Government has been slowly delegating more responsibility to the Canadian port authorities. The Director of Real Estate assisted in the preparation of Table 1 - Evolving Role of the POV. This table provides a brief summary of how the responsibilities of the entities responsible for the administration of the POV have evolved over the last seventy years.

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Table 1 - Evolving Role of the POV

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<td>Department of Government</td>
<td>Federal Crown Corporation</td>
<td>Quasi-Private</td>
<td>Private</td>
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[1] National Harbours Board  
[2] Vancouver Port Corporation

1.2.1 National Harbours Board

The NHB was established in 1936 pursuant to the National Harbours Board Act

22 National Harbours Board Act, R.S.C. 1936 C.42, section 3(1).

23 An Act to amend the National Harbours Act, the Government Harbours and Piers Act, the Harbour Commission Act, the Canada Shipping Act and the Fishing and Recreational Act, R.S.C. N-8 180-81-82-83, c.121.
1.2.2 Vancouver Port Corporation

VPC was created pursuant to Section 6.2 of the Canada Ports Corporation Act\textsuperscript{24}, which stated that “All property acquired or held by a local port corporation is the property of Her Majesty in Right of Canada and title thereto may be vested in the name of Her Majesty or in the name of the corporation.” VPC entered into Terminal Services Agreements (“TSA”)\textsuperscript{25} with various stevedoring companies to allow for the stevedoring companies to perform the stevedoring services at a container terminal. The Federal Government also granted VPC more authority to manage the operations of the POV. One of the reasons for this action was the slight change in legal structure making VPC a federal crown corporation, as opposed to a department of the Federal Government. This transition gave the VPC more control on how to best develop the POV. However, Ottawa still had to approve major decisions.

1.2.3 Vancouver Port Authority

In 1995, the Federal Government, based on the National Marine Policy of 1995, decided to create new port authorities. The basis of the policy was the following quote:

We are a trading nation. One in three Canadian jobs depend upon our export performance. The current economic recovery is export-driven, and a safe, affordable, integrated national transportation system is essential to Canada’s competitiveness at home and abroad. A vital component of this system is marine transportation. The marine sector contributes $2 billion a year to the gross domestic product and moves 224 million tonnes of international trade. Canada needs a clearly defined marine strategy, which will serve as one of the key elements of the economy and support the growth and development of our international trade\textsuperscript{26}.


\textsuperscript{25} These agreements are with a stevedoring company to load and unload ships on behalf of VPC.

The CMA came into force in 1999 and pursuant to section 139(1), the Canada Ports Corporation was dissolved and all assets and obligations devolved to the Crown. To fulfill the above noted policy, the Minister of Transport created 19 new Canadian Port Authorities by way of letters patent pursuant to Section 8 of the CMA. Therefore, from a legal perspective, VPA is a non-shareholder, a for-profit federal corporation, which derives its corporate powers pursuant to the LP and the CMA. VPA is accountable to the Federal Minister of Transport. The Honourable Jean-C. Lapierre, P.C., M.P., a member of the newly elected Liberal minority government, was appointed the new Minister of Transport on Tuesday, June 20, 2004.27 Transport Canada’s mission is to develop and administer policies, regulations and services for the best transportation system for Canada and Canadians — one that is safe and secure, efficient, affordable, integrated and environmentally friendly.28

VPA enters into leases with private terminal operators to operate the terminals at the POV. At the container terminals, VPA no longer enters into a TSA with a stevedoring company, rather, to keep control of the berth corridors adjacent the container terminals, VPA will enter into berth corridor agreements with the stevedoring companies. The stevedoring company will then have two legal agreements with VPA:

- a lease, under which the stevedoring company will have control of the operation of the container terminal; and,
- a berth corridor agreement, under which VPA has control of the operation of the berth corridor.

The term of a lease and a berth corridor agreement varies as stevedoring companies have been requesting longer terms. VPA recently entered into a 51-year lease and berth corridor agreement with P&O Ports Canada. The stevedoring companies can sell their interest in the terminal to a third party, subject to VPA’s approval. This allows a stevedoring company the ability to exit the POV if it is in its best interests to do so.

The berth corridor agreement allows VPA to contract the operations of the berth adjacent to the terminal to the stevedoring company. The stevedoring company must seek approval from VPA on operational changes. In turn, VPA allows the stevedoring company to retain a portion of the wharfage collected by the stevedoring companies from the shipping lines. This concept will be discussed in further the financial section.

1.2.4 Future

As listed in Table 1 - Evolving Role of the POV, generally all ports, at one time, had three roles: as owners, operators, and regulators. The last row of the table describes the legal status of each entity. The reason the emphasis is on “one time” is because ports, like the Port of London, sold all its land to private owners\textsuperscript{29}. Presently, other ports around the world are considering privatizing the terminals\textsuperscript{30}. Thus, the traditional views and roles of ports have been evolving.

The Federal Government has not gone as far the Government of Great Britain did in privatizing its ports. Rather, the Federal Government has allowed VPA to privatize the stevedoring role. Presently, there is no indication from the Federal Government that it intends to privatize the federal real property located at the POV. However, with the trend of both provincial and federal governments privatizing crown corporations, the concept of private ownership of federal real property at the POV may be tabled in the future. Having said that, if such a topic was tabled with the Federal Government, it would be over much debate due to the present mandate of VPA “to act in the best interest of Canadians”. The question would be: Is the privatization of Canadian ports in the best interest of Canadians?

\textsuperscript{29} Drewry Shipping Consultants Ltd., World Container Terminal, Global Growth and Private Profit 35.

\textsuperscript{30} Long 211.
1.3 Inter-jurisdictional Immunity

An interesting element to this analysis is the power of the Federal Government. Under Subsection 91(1A) of the Constitution Act (the "Constitution"), the Federal Government has paramount power over the provinces and municipalities as it relates to powers to legislate in matters of "public policy". This area is exclusive to the Federal Government. In a recent legal case, Burrardview Neighbourhood Association v. Vancouver (City) ("Burrardview")\(^{32}\), a neighbourhood association challenged VPA’s decision to allow a company to build a concrete facility at the POV. The British Columbia Court of Appeal, British Columbia’s highest court, held that building structures on federal real property was not subject to the City of Vancouver’s Development By-laws.

Presently, the case has been appealed to the Supreme Court of Canada. The Supreme Court of Canada has not decided whether or not to hear the case. The decision to hear the appeal will not be made until the summer of 2004. Even if the Supreme Court of Canada agrees to hear the case, and it over turns the British Columbia Court of Appeal’s decision, VPA should still have the authority to build facilities without asking the City of Vancouver for approval. Burrardview questioned whether the construction of a concrete plant was related to shipping. If the Supreme Court of Canada decides that the development of a concrete plant is not related to shipping, VPA would be subject to local municipal by-laws as a concrete plant does not fall under the federal power of “navigation and shipping”.

As long as the planned activity falls within Subsection 91(10), “navigation and shipping” of the Constitution, VPA has the right to construct, as does its tenants, without going through the local municipality approval process. The approval process can take considerable time and money to complete. Therefore, by not having to go through the local municipal approve process, VPA and its tenants should be able to save time and money in that VPA and its tenants do not have to pay building permit fees and development cost charges to the municipalities.

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1.4 Global Stevedoring Companies

There are several types of stevedoring companies, such as global stevedoring companies, global carriers' stevedoring companies and regional stevedoring companies\textsuperscript{33}. The latter, while efficient operators, probably do not have the broad expertise VPA would be looking for in a stevedoring company.

Global carriers' stevedoring companies are an example of vertical integration. The key aspects of this type of company is that shipping, not terminal operations, is the prime focus of business. The terminals are run as a cost centre as stevedoring can account for about 25\% of the shipping costs\textsuperscript{34}. There are problems with vertical integration of the stevedoring operations. Third party shipping lines are concerned with confidentiality of their clients' information potentially going to the parent of the stevedoring company and whether third party ships or the stevedoring company’s parent shipping line will take priority during congested periods. However, the vertical integration concept may be ending. In 2004, P&O Ports and P&O Nedlloyd recently separated into two companies in order to focus on their respective core competency of terminal management and shipping\textsuperscript{35}. Also, in 2001, Maersk Sealand separated their terminal operations in a stand-alone business unit called APM Terminals\textsuperscript{36}. Though this separation has occurred, Maersk Sealand still represents about 90\% of APM Terminals’ volume.

Global stevedoring companies, ones which operate in more than one world region, are the types of stevedoring companies that VPA would like to operate a container terminal. Global stevedoring companies treat the terminal operation as their prime focus of business and run them as a profit centre. The global stevedoring companies have an extensive network with shipping lines to spread the risk of failure as they are not tied to one shipping line like the global carrier

\textsuperscript{33} Drewry Shipping Consultants Ltd., \textit{World Container Terminal, Global Growth and Private Profit} 35.


\textsuperscript{36} Drewry Shipping Consultants Ltd., \textit{Global Container Terminals: Profit, Performance and Prospects} Section 6.2.
stevedoring companies are\textsuperscript{37}. There are several global stevedoring companies, the main being Hutchison Ports Holdings, PSA Corporation (Port of Singapore Authority), APM Terminals, P\&O Ports and Eurogate\textsuperscript{38}. 

One method to determine a stevedoring company's productivity is to measure the number of TEUs per acre per annum that it handles. The productivity is based on the efficient operations of the berth, the container yard, intermodal yard and the gate (where trucks are loaded and unloaded). To increase the productivity, all four components of the terminal must work together in order to allow for the flow of TEUs moving to and from the terminal. The stevedoring company will analyze all four components when making a decision to locate its operations at a port. Presently, the target productivity level for the west coast ports is 6,500 TEUs per acre per annum\textsuperscript{39}.

1.5 Container Destination

Figure 6 - 2003 Container that illustrates not all imports remain in British Columbia. Over half of the imports leave British Columbia and travel to eastern Canada and the US.

\textsuperscript{37} Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects, table 6.4.

\textsuperscript{38} Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects, table 6.25.

However, over the next twenty years, the diversity in the shipments of imported goods is forecast to change. Figure 7 - 2020 Container Destinations Forecast shows that the shipments to the US are forecast to increase from appropriately 7% to 40%. The 40% is composed of 22% of direct shipments and 18% transhipments. Transhipment refers to repackaging of the goods to be shipped to the US in combination with other goods. If the forecast is correct, VPA will increase its rivalry with the Pacific Northwest ports as VPA will be directly targeting exporters to the US as potential clients of the POV.
1.6 Financial

When looking at the financial aspect, each party, (VPA and the stevedoring company), has different factors to consider. From a stevedoring company’s perspective, in order to determine its own unit cost per TEU, the stevedoring company has to compare how labour expenses, terminal staff and overhead, utilities and maintenance, lease payments, depreciation expenses (allowed under different jurisdictions), property tax and leasehold tax (if any), compare to another jurisdiction in order to determine the appropriate location.

However, the financial consideration is just one of the many factors the stevedoring companies must consider. Stevedoring companies also look at the intermodal connections (sea
and land), ship arrival patterns, tidal/weather restrictions, and the labour market
d40. A terminal operator also considers the risk of a country. These risks relate to rule of law and enforceability of
contracts, the risk of expropriation, the risk of creeping expropriation (taxed out of business),
fairness of the court system, the controls on exchange rates, the risk of government debt default
and probably the most important item, the ability of the government to honour its long term
commitments d41. In light of September 11, 2001, the ability to illustrate to the world that a
country/port has sound customs and security procedures in place has been another important
factor in a stevedoring company’s decision to locate at a port.

If the container terminal is already built and just needs minor renovations, then the
negotiations between VPA and the stevedoring company will focus on rent, perhaps some
financial inducement. However, if there is a conversion cost or a major expansion required, then
the negotiations will not only relate to rent, but also on who will pay for the capital
improvements. VPA, with the restrictions on borrowing, may be in a weaker negotiating position
as stevedoring companies can raise financing without the restrictions that VPA has pursuant to
its LP.

For VPA, the economic generator versus commercial generator comes into play. VPA
wants a fair return on the investment it is managing. As stated earlier, however, the amount of
return on investment may be lowered depending on the “best interests of Canadians” (economic
generator) versus best commercial deal dilemma (commercial generator). The highest and best
use of a piece of POV property may or may not be for containers. However, in the “best interests
of Canadians”, VPA may have no choice but to invest in the container terminal.

40 Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects, Table 2.13.
41 Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects, section 4.1.3.2.
2 INDUSTRY ANALYSIS

2.1 Industry Value Chain

A port is an integral part of the global integrated logistics chain, which is generally defined as a procedure to optimize all activities to ensure the delivery of cargo through the transport chain from one end to the other, as a port is the intersection of different modes of transportation\textsuperscript{42}. This discussion of the industry value chain will focus on government owned ports as opposed to privately owned ports. The discussion will also focus on regional distribution centre ports\textsuperscript{43}, also known as load centres. These types of ports have a collection of specialized terminals. The Pacific North-West Ports are considered load centres as each port has specialized terminals.

Ports have similar infrastructure, which includes:

- Maritime access infrastructure: channels and navigational aids;
- Port infrastructure: docks and wharves;
- Terminals: cranes and buildings;
- Land access: road and rail connections; and
- Other facilities: such as offices and other commercial operations.

How a port manages the infrastructure will distinguish it from other ports. For example, in Canada, a port authority is responsible for ongoing maintenance dredging in order to ensure that existing ships can continue to enter a port safely. If a port authority neglects to perform the dredging service, some ships may not be able to enter the port, which would, in turn, affect the shipping lines’ and stevedoring company’s operations. In the US, the US Army Corps of Engineers is responsible for the cost of dredging. It may allow a port authority to perform the work on a cost recovery basis. This is discussed in further detail in Section 2.4.2.


\textsuperscript{43} Long 221.
In addition to maintenance dredging, a port authority may also dredge to deepen a channel to allow larger ships to enter. If a ship can enter a port but not dock, depending on the lease arrangements between a port authority and a stevedoring company, either one may be responsible for the cost of the dredging. In recent developments, Canadian port authorities have attributed dredging costs to the stevedoring company.

Though dredging may sound like a routine activity, it can cause environmental problems. Any contaminated material that may be in the sediment will be disturbed and released into the marine environment. Once the dredging begins, the sediment must be relocated somewhere. The most cost efficient means is ocean dumping, but this may not be allowed depending on the nature of the contamination level in the sediment. If the contamination is above a certain level, the sediment must be dumped on land at a special contamination site. This adds costs to the overall dredging budget.

As shown in Figure 8 - Industry Value Chain, a port is a key link in the intermodal chain. As such, a port must take measures to assist its customers, i.e. the shipping lines and other stakeholders, to combat increased competition and adjust to new trends. In 1999, the President and Chief Executive Officer of the Montreal Port Authority summarized the role of a port authority as follows:

To meet their demands (he is referring to shippers), all pieces of the intermodal puzzle must fit together easily. Ports must continue to play a key leadership role in intermodal transport and be the glue that holds the intermodal chain together. They must ensure that everyone – shipping line and agencies, terminal operators and stevedores, railways, trucking, employers, labour, in short, all those on land and on water involved in the transport of goods – continues to work together to strengthen every link in the intermodal chain.

(Initialized author’s notes)

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44 Figure by author, based on work of M.E. Porter, Competitive advantage: creating and sustaining superior performance. (New York. The Free Press 1988).

45 Logistics Quarterly, The role of Ports in Intermodal Transport, October 1999 volume 5, issue 3.
Though the industry value chain appears to be a simple one, it is actually complex. If one of the links is weak or fails to perform, then the whole logistics chain becomes inefficient. An arrival of a ship at a container terminal should coincide with the arrival of trains and trucks to deliver out-bound containers and to take away in-bound containers in order to have a just-in-time delivery. If any component is significantly late, then the chain becomes inefficient. The port’s main customer, the shipping line, may look to alternative ports to ensure timely delivery of its customers’ goods.

2.2 Overview of the Container Industry

The container industry is a relatively new industry. The first deep-sea container service was developed out of necessity in 1966. Prior to 1966, most general cargo was loose cargo, such as individual packages, boxes and the like, each of which was handled and stowed separately. The cost associated with loading and unloading the loose cargo became increasingly uneconomical for the shipping lines, which were unable to deliver general cargo and to maintain a reasonable profit. Containerization was developed to speed up the flow of cargo. Shipping general cargo in TEUs, which a ship, train car and a truck were able to easily load and unload, made the delivery of the general cargo from point of origin to final destination economical.

Since 1966, the world container market has been growing at an amazing rate. By 1980, 23% of the world general cargo was containerized. In 2003, approximately 75% of the world general cargo was containerized. With the growth in containerization, the main ports on the West Coast of North America, namely, Long Beach, Los Angeles, Oakland, Tacoma, Seattle and

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Vancouver, are predicted to have significant capacity problems by 2010. To address this capacity issue, the POV has announced plans, over the next decade, to expand its container facilities so the POV can triple its annual container handling capacity from 1.7 million TEUs to approximately 5 million TEUs. The Port of Tacoma recently announced plans to spend more than $200 million US to build what would be the largest container terminal north of Los Angeles, California to address the potential capacity issue.

The Pacific North-West Ports' main trading areas are Asia (mainly China/Hong Kong, Japan, South Korea and Taiwan) and Oceania (a name used for varying groups of islands in the Pacific Ocean, including New Zealand and Australia), with 95% of the POV containerized cargo coming from those areas. With the economic growth rate in China growing at 10.7% for the first three months of 2004, the expectation is that the container traffic growth for the Pacific North-West Ports will continue to grow.

Figure 9 - West Coast Container Traffic shows the percentage of container traffic for each major west coast port of North America. Presently, the POV has a greater share of the west coast container volumes than Tacoma and Seattle. One of the reasons the POV's percentage is greater than the other two ports, is due to the development of Deltaport, which has allowed the POV to capture the Canadian and some US bound containers.

For the purposes of Figure 9 - West Coast Container Traffic, VPA only uses foreign laden containers. The reason relates to the US' Jones Act of 1917 and related statutes. These statutes, known as cabotage laws, require that ships used to transport cargo and passengers...

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48 Vickerman slide 43.
50 “Port of Tacoma plans major terminal”, Associated Press 02 March 2004: 12.
51 O'Keefe 6.
54 Jones Act, Mar.2, 1917, Ch.145.
between U.S. ports must be owned by U.S. citizens, built in U.S. shipyards, and manned by U.S. citizen crews. According to the Maritime Cabotage Task Force, the cabotage laws are the foundation of the US maritime industry, the largest and most vital sector in the US merchant marine and a key link in the America's intermodal transportation network. Since no foreign shipping line can compete in the US internal market, the POV has elected to compare foreign laden containers in its comparison of container traffic for the west coast ports.

*Figure 9 - West Coast Container Traffic*

The increase in the number and size of container ships being built is adding to the container growth. The average Panamax class ship can carry approximately 4,000 TEUs. However, the majority of the post-Panamax class ships that were ordered in 2001 were designed

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to handle 5,000 plus TEUs\textsuperscript{57}. With respect to the increase in the size of ships, the challenges facing stevedoring companies will be their ability to unload and load the ships efficiently and allow the ships to berth at the terminal, especially with the depth of the ocean at the dock being a potential issue.

To facilitate the increased size of the ships, ports and stevedoring companies have been ordering new cranes in order to load and unload the new ships efficiently. The cost of new cranes has increased dramatically. The first cranes were built in the 1960’s at a cost of approximately $750,000 US\textsuperscript{58}. In the fall of 2003, the estimated cost of a crane was approximately $8 million Canadian\textsuperscript{59}. Thus the decision to order new cranes to meet the anticipated increased size of ships is an expensive proposition. The Port of Seattle recently purchased three new cranes, at a cost of $7.83 million US each, which are capable of unloading and loading ships 22 containers wide. These ships have not yet been built\textsuperscript{60}.

For the next three years, North America’s container industry growth forecast remains strong, with growth forecast to be 5.7\% for 2004, 7.9\% for 2005 and 5.4\% for 2006\textsuperscript{61}. Accordingly, ports must have their facilities managed properly to ensure the efficient movement of containers. A port authority and a stevedoring company both have similar roles. Both act as facilitators in the movement of goods in the supply chain, therefore, the goals are aligned. The more TEUs that are destined for a port, the more TEUs will be delivered through container terminals, and ultimately more financial rewards to each entity.

VPA is no longer involved in the stevedoring role. The POV has three container terminals for a combined total of 308 acres and 6 berths. TSI Terminal Systems Inc, a subsidiary of Orient Overseas (International) Limited, operates the Deltaport and Vanterm container terminals. P&O Ports, through its subsidiary P&O Ports Canada, operates Centerm. Neither of

\textsuperscript{57} Vickerman slide 64.  
\textsuperscript{58} Vickerman slide 84.  
\textsuperscript{61} Drewry Shipping Consultants Ltd., Annual Container Market, Review and Forecast 34.
these companies operate in the ports of Seattle nor Tacoma. VPA is fortunate to have a global stevedoring company like P&O Ports and a global carrier company like Orient Overseas (International) Limited operating at POV\textsuperscript{62}. The recognition that these global companies provide the POV is important. These global companies bring their world experience and knowledge to the POV and the arrival also signals to the world that the POV is a reputable port and a place that is open for business.

2.3 Chart

Figure 10 - Pacific North-West Container Terminal Industry 2004 chart shows how competitive the container terminal industry is in 2004\textsuperscript{63}. The industry analysis will only look at the competitiveness between the ports of Seattle, Tacoma, and Vancouver as all three offer similar features to a stevedoring company. The industry analysis will not look at the other British Columbian ports, as these ports are not presently seen as competitors for deep-sea container operations.

\textsuperscript{62} Drewry Shipping Consultants Ltd., World Container Terminal, Global Growth and Private Profit 55.

Pacific Northwest Container Terminal Industry 2004

**Threat of Entry**

*Low to Moderate*

- High cost of construction and capital reinvestment
- Availability and low cost of capital
- Uncertain world events
- Strong likelihood of retaliation to entrance

**Bargaining Power of Suppliers**

*High*

- Rail lines - contracts with shipping alliances give them power with stevedoring companies
- Trucking companies - a link in the supply chain
- Labour - unionized and limited supply of skilled labour
- Insurance - increased costs put pressure on companies
- Off-Site container handling facilities - allow stevedoring companies to increase the use of its terminal(s)

**Rivalry Among Existing Competitors**

*Moderate*

- Homogeneous product offerings
- High fixed costs
- Declining switching costs
- Government regulations
- US/Canada exchange rate
- Industry is growing

**Bargaining Power of Customers**

*Moderate to High*

- Global stevedoring companies - bring knowledge and capacity to a port
- Shipping lines - through alliances, have buying power over stevedoring companies
- Freight forwarders - can influence power through choice of shipping lines
- Residents - not direct customers, place operating restrictions on terminal operations

**Threat of Substitute Products / Services**

*Low to Moderate*

- Increases pressure
- Decreases pressure

- Alternative trading routes
- Other terminals
2.3.1 **Brief Description of Ports of Seattle and Tacoma**

The Port of Seattle is located in downtown Seattle, Washington. The port is a municipal corporation with a five-member commission elected to administer the affairs of the port. The Port of Seattle derives its income from operations, property taxes, revenue bonds, Government Bonds and grants. The Port of Seattle provides all services with its own employees except for the stevedoring services. The Port of Seattle has container, cruise, and break bulk (including grain) terminals. The three container terminals, Terminals 5, 18 and 46, have a combined total of 466 acres and 10 berths. They are managed as follows:

- Eagle Marine Services manages Terminal 5 and also manages terminals in Los Angeles and Oakland.
- SSA Terminals, which is the largest US based stevedoring company, with operations on the west and east coasts of the US, manages Terminal 18.
- Total Terminals Inc. manages Terminal 46 and also manages terminals at Long Beach and Oakland.

These three terminals handle a number of shipping lines. Recently, the Port of Seattle upgraded Container Terminal 46 as part of a $71 US upgrade. This included the installation of three new cranes capable of unloading and loading extra load-sized ships that have not yet been built.64 The annual TEU volume is now approximately 1.3 million TEUs.

The Port of Tacoma is also a municipal corporation. Like the Port of Seattle, a board of commissioners, elected by the Pierce County voters, handles the affairs of the port and its income is essentially derived from the same means. The main difference between the two ports is the Port of Tacoma leases facilities to others but reserves the right to operate a terminal65. The Port of Tacoma has container, bulk, gypsum, and break bulk (including grain) terminals. The four container terminals have a combined total area of 320 acres and 7 berths. The names of the containers terminals are:

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• Evergreen Terminal – operated for the benefit of the Evergreen Shipping Company.
• Husky Terminal – operated for the benefit of the K-Line Shipping Company.
• Hyundai Terminal/Washington Limited Terminal – operated for the benefit of the Hyundai Merchant Marine Company.
• APM Terminal – operated for the benefit of Maersk/Sealand and for Horizon Lines, which services Alaska, Hawaii and Guam.

These terminals are operated for the benefit of global carriers. In the Port of Seattle, independent stevedoring companies operate the container terminals. Recently, the Port of Tacoma announced an upgrade to the Husky Terminal allowing it to use the land more efficiently\(^{66}\). The annual TEU volume is approximately 1.5 million TEUs.

Both the Port of Seattle and the Port of Tacoma are aggressively targeting the container industry with expansions to the container terminals and upgrades to the intermodal facilities at both ports. These developments illustrate the strategic planning to capture future container business.

2.3.2 Ports of British Columbia

There are five main ports on British Columbia’s west coast: POV, Fraser Port, North Fraser Port, the Port of Prince Rupert, and the Port of Victoria. Both the Fraser Port and the North Fraser Port are located on the Fraser River. The area at the mouth of the Fraser River can support a deep-sea terminal\(^{67}\) and the remainder of the Fraser River is not deep and wide enough to support a deep-sea terminal. The Fraser River Port Authority recently announced an expansion to its main container terminal to allow it to reach a capacity of 415,000 TEUs per

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annum\textsuperscript{68}. This may cause rivalry with VPA. However, for the container industry analysis, the ports on the Fraser River are not considered rivals.

Although the Port of Prince Rupert is a deep-sea port, it presently does not have the infrastructure in place to handle the container ships. The Prince Rupert Port Authority has selected the New Jersey based Maher Terminals to development a state-of-art container terminal. The terminal will be built in phases, with the first phase opening late 2006 and the second phase opening in 2009. When completed, the terminal will have capacity to handle 1.2 million TEUs per annum\textsuperscript{69}. The total time to ship goods through the Port of Prince Rupert is 1.5 days faster than any west coast port\textsuperscript{70}. However, there are several major hurdles facing this development, the main one being competitive rail service. Until these issues are resolved, the Port of Prince Rupert is not considered a rival.

Finally, the Port of Victoria is not considered a rival either as Victoria is located on an island. Even if the Port of Victoria attempted to lure stevedoring companies away from the POV, they would have a difficult time as the goods would have to be shipped across the Strait of Georgia. The added cost would not justify a global stevedoring company to locate in Victoria.

For these reasons, the ports located in British Columbia are not seen as competitors to the deep-sea container business, however, regional competition among the ports is an issue. Given the high cost of developing a terminal, there will be synergies gained if the five port authorities were either amalgamated into one port authority, or the authorities developed a common vision for development of a regional port system. In doing so, the five port authorities could develop their respective ports in the best interests of Canada and compete with the American ports, as opposed with each other. For example, since the Port of Prince Rupert is the closest port to the huge liquefied natural gas ("LNG") production projects in the Middle East, Indonesia and Australia, it may be more suited to focus on developing LNG terminals as opposed

\textsuperscript{68} Bill DiBenedetto and Alan Daniels, "Western Canada ports: Commercial and trade engines", Pacific Shipper, 2 July 2004: 10.

\textsuperscript{69} Bruce Constantineau, “Prince Rupert plans $500m port expansion”, Vancouver Sun, 27 July 2004: A1.

\textsuperscript{70} Brian Lewis, “Prince Rupert terminal is a go”, Vancouver Sun, 18 June 2004: A49.
to container terminals\textsuperscript{71}. In addition, since the Fraser River Port has to dredge the Fraser River to allow for the larger ships, perhaps it should focus on other business\textsuperscript{72}. These are just a few examples on how the British Columbian ports could work together.

2.4 Rivalry Among Existing Competitors

"Moderate"

With growth in the container industry forecast to increase and with limited capacity of existing container terminals, existing competitors have to increase the productivity level of existing container terminals in order to attract more business. Thus, stevedoring companies and port authorities are jointly finding ways to improve the movement of containers.

2.4.1 Homogenous Product

Although the development of the containers in the 1960's facilitated trade, this made container terminals a homogenous product. The design and operation of a container terminal is a complex task but the overall design is similar. In designing a standard container terminal, a designer would take the following factors into consideration:

- Projected Throughput of Containers: The designer looks at historical and likely trends together with geographic, demographic, financial, economic and commercial factors.
- Water Depth at the dock: The post-Panamax ships are bigger with larger keels. The designer must ensure the water depth at the dock face will be deep enough to allow the post-Panamax ships to dock.
- Quay Design: This quay is where the interface between the ship and the land occurs. The quay must be designed to handle design loads. The fendering system must also be incorporated into the quay design.
- Container Yard: The yard is designed to meet the projected throughput of containers. The yard is typically defined by the number of terminal ground slots ("TGS"), which is the footprint of a TEU. In determining TGS, a designer looks at dwell time (average time a TEU is stored), stacking heights, split between empty and full containers, split between refrigerated and non-refrigerated containers and split between import and export.

Intermodal Connections: A designer must make allowances for rail tracks and the number of rail cars to service the rail companies and roads to service the trucking companies. The design needs to ensure that the desired flow and circulation of these vehicles are achieved.

Buildings: The buildings typically include an administration building, workshop, canteen and amenities, container freight station (warehouse for loading and unloading containers), verification (customs) building, and gatehouse function.

Services: Key services include an electrical sub-station, electrical cabling, lighting, fire system, fresh water supply, storm water drainage, communications, and water waste treatment.

The homogenous nature of container terminals was illustrated during the long shore workers strike at 29 west coast (US) ports in the fall of 2002. Some shipping lines easily moved their business to the POV and, as a result, the Port of Seattle lost business to the POV. The public probably perceives the rivalry between the ports as gentlemanly. During the strike in 2002, officials at the POV insisted that they would not use this strike in their marketing efforts. VPA's President and Chief Executive Officer advised that VPA had sent letters to its stevedoring companies stating that the POV would not be accepting any new cargo originally bound for the US. During the strike, the Port of Seattle officials acknowledged that the POV had come from nowhere to become a serious rival. The strike helped clarify the rival issue for the Port of Seattle officials. During the April 2004 British Columbia tug and barge strike, incoming ships to the POV were diverted to the ports of Tacoma and Seattle. Although it is easy for shipping lines to move between ports, the ports do not appear, on the surface, to be aggressively marketing their port at the expense of another.

Once designed and then built, any given container terminal is capable of handling the same products as another container terminal. Thus, the distinguishing factor between one terminal and another, among other factors, will be the operational efficiency of the stevedoring

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72 DiBenedetto and Daniels 10.


company. With the advancement in technology for terminal management and the increased size of cranes, a newly constructed or recently refurnished container terminal should have a competitive advantage over its competitors. However, since the technology is easily copied, the advantage may be short-lived. In the POV, both P&O Ports and TSI Terminals elected to upgrade their existing facilities at the same time. The stevedoring companies hope to make the container terminals more efficient, in an attempt to gain a competitive edge over the competition or at least remain at the same competitive level.

2.4.2 High Fixed Costs

Once a container terminal is built, costs associated with maintaining the terminal are split between the port authority and the stevedoring company. A port authority is responsible for the maintenance-dredging, repair caused by subsidence and caissons maintenance. Maintaining the depth at the berth may require dredging of the berth from time to time. Since terminals are located near or on the ocean, there could be subsidence of the terminal foundation from time to time. Depending on the severity of the subsidence, the cost could be great. Finally, the berth is supported by caissons, which may need repair over the life of the lease.

The stevedoring company is typically responsible for all other costs associated with the maintenance of a terminal. These costs include maintenance of the cranes, pavement, buildings and services. The stevedoring company may also be responsible for dredging to increase the depth at the berth and allow larger ships to dock at its terminal. This latter term is subject to negotiations between the parties and the cost is reflected in the amount of rent the stevedoring company pays to the port authority.

The Ports of Seattle and Tacoma have an advantage over the POV when it comes to the cost of dredging. In the US, with respect to dredging operations, under US federal law, the US Army Corps of Engineers bears the legal responsibility for dredging and maintenance of US ports. In some cases the ports themselves will actually conduct their own dredging operations, but this is done on a cost-recovery basis under which the US Army Corps of Engineers effectively contracts out its dredging obligation to the port. The US Army Corps of Engineers
will reimburse the port for all the costs associated with it undertaking its own dredging. In Canada, either the port authority or the stevedoring company has to pay for the cost of dredging. This gives the Ports of Tacoma and Seattle an advantage over the POV.

2.4.3 Declining Switching Costs

If the container terminal is built and is ready to be operated, subject to minor repairs, the cost for a stevedoring company to move from one location to another, other than terminating any legal obligations they may have at another terminal, will be based on the cost to move their personnel and office. Assuming the container terminal has been designed as described in Section 2.4.1, the container terminal should have the necessary infrastructure to allow the stevedoring company to service its customers, the shipping lines, in an efficient and effective manner, without any major expense being incurred.

2.4.4 Government Regulations

The purpose of the North American Free Trade Act ("NAFTA") is to eliminate barriers and facilitate cross-border movement of goods and services between Canada, US and Mexico\(^7^6\). However, with the events of September 11, 2001, security has been increased at the Canadian/American borders and ports. On July 1, 2004, the International Ship and Port Security Code ("ISPS") came into force for countries that signed the International Maritime Organization Agreement\(^7^7\). Both the US and Canada are signatories and each implemented regulations, which

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\(^7^7\) Korstrom S11.
are even stricter than the ISPS code\textsuperscript{78}. On June 30, 2004, VPA announced that the POV was ISPS compliant\textsuperscript{79}.

Among other things, ISPS requires that all employees working at cargo handling companies must have identification cards. If they do not have identification cards, ships that dock at the POV could be barred from entering the United States and vice versa. In order to ensure compliance with ISPS, the US government has already agreed to pay $1.1 billion American, to assist in the cost to provide security upgrades to American ports. The Canadian government has agreed to fund an approximately $115 million dollar cost\textsuperscript{80}, retroactive to April 1, 2004 to assist in the cost to provide security upgrades to Canadian ports. Any costs incurred prior to April 1, 2004, and any additional costs, will be absorbed by the ports and stevedoring companies.

In addition to the above, in January 2002, the U.S. Customs and Border Protection agency implemented the Container Security Initiative ("CSI")\textsuperscript{81}. CSI's purpose is to allow US agents to examine maritime containers at foreign ports before the containers enter the US. The US also implemented a reciprocal program, allowing foreign countries to do the same. Canada has elected to send its agents to the US ports. As part of Canada's Advance Commercial Information initiative ("ACI"), all shipping lines exporting to Canada must provide a cargo report to the respective customs agencies at least 24 hours before cargo is loaded at the point of origin\textsuperscript{82}. The US has a similar rule, if the shipping lines do not provide the cargo report 24 hours in advance, they risk being fined and also being barred from entry to the respective country\textsuperscript{83}.

\textsuperscript{78} "Canada goes beyond ISPS requirement", \textit{Fairplay Daily News Service}, 27 May 2004, \texttt{<www.fairplay.co.uk>}.  

\textsuperscript{79} Vancouver Port Authority, \textit{Port of Vancouver meets new international security standards, continues to investments in security initiatives}, Press Release, 30 June 2004 \texttt{<http://www.portvancouver.com/media/news_20040630-2.html>}.  

\textsuperscript{80} "Security Funding $115 million over 3 years", \textit{West Coast Marine Security Newsletter}, May 2004, Volume IV.  


New regulations relating to the air shed quality may soon be applying to stevedoring companies’ operations. The Greater Vancouver Regional District ("GVRD") developed the "Air Quality Management Plan" in order to manage the air shed in the GVRD\textsuperscript{84}. The GVRD would like the plan to apply to all forms of industries. However, due to federal and provincial jurisdictional issues, the GVRD’s plan does not apply to the stevedoring companies. In the US, although not a law yet, the City of Los Angeles is encouraging all shipping lines to have a system in place to allow the ships to tie into the Los Angeles power grid. When the ship is docked, the ship will use electricity as opposed to running the ships diesel engines\textsuperscript{85}.

There are cross border studies regarding the air shed of the Georgia Basin/Puget Sound\textsuperscript{86}. Eventually, air shed related rules and regulations would apply to the shipping lines and to the stevedoring companies. When this occurs, each company will incur additional costs to comply with the new air shed regulations. If the air shed regulations are more restrictive in Canada, the Ports of Seattle and Tacoma could market themselves as a business friendly port, to the detriment of the POV. This would lead to increase rivalry between the ports.

The government regulations may influence a stevedoring company’s decision to locate in Canada or the US. If shipping lines are delivering goods that are destined to the eastern US and they feel that the US is contemplating further border security procedures or unreasonable air shed regulations, the shipping lines may elect to use an American port for the comfort of knowing that their goods will not be potentially delayed at the Canada/US border.

\subsection*{2.4.5 \textit{US/Canada Exchange Rate}}

The exchange rate is an important factor in assessing the competitiveness of the Pacific Northwest Ports. A recent article states that the Canadian currency (at that time 63 cents US)

\begin{itemize}
  \item \textsuperscript{84} "Air Quality Management Plan", Greater Vancouver Regional District, 15 July 2004, <http://www.gvrd.bc.ca/air/planning_plans.htm>.
  \item \textsuperscript{85} "Plug-in ships at LA", Fairplay Daily News Service, 18 June 2004 <www.fairplay.co.uk>.
\end{itemize}
gave Canadian ports an advantage over American ports. To determine the exchange rate, which would neutralize this advantage over American ports, VPA attempted to normalize costs between the various ports. Once the costs had been normalized, VPA then applied different exchange rates to the costs to determine the exchange that would make the costs equivalent. The costs VPA took into consideration were cargo charges, such as stevedoring and wharfage and ships' charges, such as pilotage, tugs, lines handling fees, harbour dues, customs fees, and berthing. The determination was a difficult one, but with the Canadian dollar at 80 cents US, the POV's advantage, as a result of the exchange rate, would be neutralized. Thus, the exchange rate will have influence on a global stevedoring company's decision to locate in Canada or the US. For 2004, the average exchange rate has been approximately 75 cents US, still giving VPA an element of advantage over the Ports of Seattle and Tacoma.

2.5 Threat of Entry

"Low to Moderate"

The threat of entry is not from a private company or individual but rather another port authority. The cost to construct a new terminal or convert an existing bulk terminal to a container terminal is expensive. The reason the threat of entry is low to moderate is due to the political agenda. If a government wants to develop a region, then the entry may happen through government assistance, not purely for financial reasons.

2.5.1 High Cost of Construction and Capital Reinvestment

The cost to develop a new container terminal or convert an existing bulk terminal to a container terminal is high. At Roberts Bank, in Delta British Columbia, the cost to build a new container terminal, including land reclamation, could be as much as $700 million Canadian. The cost to add an additional berth at an existing container terminal at Deltaport is anticipated to cost $225 million Canadian. To convert an existing bulk terminal, the terminal has to be realigned.

87 Jones Act, Mar. 2, 1917, Ch. 145.
89 Korstrom S8.
to allow for the maximum number of TGS, new rail configuration and gate confirmation to name a few. To do the construction, the cost would be in the tens of millions of dollars. If VPA elected to commence with either one of the developments, VPA would easily reach its borrowing maximum as set out in its LP. VPA could not take on any more developments. However, the Ports of Seattle and Tacoma do not have this restriction. This gives the Ports of Seattle and Tacoma an advantage over the POV when it comes to developing new terminals.

The cost to increase capacity at an existing container terminal is substantially less. However, the cost is still significant. P&O Ports recently announced their plans to modernize its combined bulk and container terminal located at Centerm costing approximately $130 Million Canadian\(^{90}\). This latter cost is in addition to the cost incurred in building the terminal. Finally, with added government regulations, especially relating to security, stevedoring companies are forced to spend extra money to comply with the regulations to ensure that their customers are being efficiently serviced.

As for the political agenda, both the British Columbian government and Canadian Federal government have pledged money to the Prince Rupert port authority to encourage development of a container terminal. On its own, the Prince Rupert port authority may not be able to justify the cost to build a new container terminal, but with government assistance, the concept of building a container terminal is possible.

Typically, ports have a limited amount of existing land available for new terminals. A new container terminal would have to be developed at the expense of converting an existing bulk terminal, purchasing new lands or reclaiming land. The difficulty with the latter is the environmental concerns both in Canada and the US. To obtain environmental clearance in Canada involves a long, costly and difficult process. The process is more difficult if the lands are not federal real property. Although it is beyond the scope of this analysis, it is appropriate to mention the various government agencies that need to be contacted to obtain approval for land reclamation: Federal Department of Fisheries, Environment Canada, Provincial Ministry of Water, Land and Air, Greater Vancouver Regional District, the local government, and First Nations.

\(^{90}\) Christopher Donville, "P&O Ports to spend $130 million to double terminal capacity", Vancouver Sun, 24 March 2004: D1.
2.5.2 Availability and Low Cost of Capital

The availability of capital varies between American ports and Canadian ports. American ports typically have the availability to raise capital through different means, such as port revenues, general obligation bonds, revenue bonds, loans, grants and other revenue (which includes the right to levy property taxes outside of the port). In Canada, ports have a much more restrictive availability to raise capital. The ports are restricted to port revenues and debt financing up to the borrowing limits as set out in the letters patent of a port authority. The American ports can develop all aspects of their respective ports, including the container terminals, without any borrowing restrictions unlike the POV. If VPA elects to use all its borrowing capacity to construct a container terminal, then VPA cannot build or modify any other terminal other than through cash flow. This availability to raise capital by American ports and no restrictions on funding gives the American ports a competitive advantage over the POV.

The Ports of Seattle and Tacoma are able to access federal and state grants to assist in the development of a terminal. However, VPA cannot access grants. The present interpretation of the CMA is that the Federal Government is not able to make any appropriation to VPA to allow it to discharge an obligation or a debt. In other words, the Federal Government cannot give money to VPA to allow VPA to pay off any of its debt. Like the restriction on borrowing limits, this restriction does not allow VPA access to Federal infrastructure funding to pay off an obligation or debt even though the infrastructure projects may be have been for the betterment of Canada as a whole.

The American government’s ability to provide subsidies does not violate NAFTA. Although NAFTA’s purpose is to eliminate barriers to trade, it does not apply to subsidies. While port services fall within the scope of NAFTA Chapter Twelve, which addresses trade in services, Article 1201(2) provides that Chapter Twelve does not apply to subsidies or grants provided by a party, including government-sponsored loans, guarantees and insurance. Therefore, for the foreseeable future, the American ports can receive subsidies and grants without being in violation of NAFTA.
The Ports of Seattle and Tacoma are not required to pay a stipend or income tax to the federal government. By not paying any money to the US government, the ports can use this capital to develop their ports. However, VPA must pay to the Canadian Federal Government an annual stipend. This places the POV at a competitive disadvantage with respect to the Ports of Seattle and Tacoma as these ports can use all of their capital to improve the ports.

With interest rates at historic lows, port authorities are able to embark on capital projects with less interest expense to account for in their financial projections\(^1\). The Ports of Seattle and Tacoma anticipate capital expenditures of $1.2 billion US during the period 2001 - 2005. These ports only spent $943 million during the period 1996 - 2000\(^2\). Eight of the biggest ports in Canada, by contrast, will only spend approximately $701 million dollars during the period 2001 - 2005\(^3\).

2.6 Bargaining Power of Customers

"Moderate to High"

The stevedoring companies' customers have options available to them on selecting the appropriate container terminal through which their goods are channelled. The efficiency of the container terminal is a critical factor in the customers' decisions. The main customer of a stevedoring company is the shipping line. However, a stevedoring company is a customer of a port. To understand the power of a shipping line, it would be prudent to discuss the power of a global stevedoring company as well as the shipping lines.

2.6.1 Global Stevedoring Companies

The main five global stevedoring companies are: Hutchison Ports Holdings, PSA Corporation (Port of Singapore Authority), APM Terminals, P&O Ports and Eurogate\(^4\). A port


\(^2\) IBI Group Ltd. 3.

\(^3\) IBI Group Ltd. 17.

authority will entertain local representatives, but to capture the global market and to be recognized as a world-class port, a port authority would like to have one or more of the big five global stevedoring companies operating at its port.

The big five have sufficient bargaining power when entering into a new market. Typically, the big five global stevedoring companies will have contracts with one of the shipping alliances (discussed in 2.6.2 Shipping Lines). The stevedoring companies will have a working relationship with both the railway companies and trucking companies to allow them to have access to the container terminal. The contract between the shipping alliance and stevedoring company should help increase the volume of TEUs to be delivered at a port. In turn, both the port authority and the stevedoring company should have increased profitability. Thus, a global stevedoring company has leverage when negotiating a lease with a port authority. As a result of the contract between the shipping lines and the stevedoring company, the stevedoring company may be able to direct business to the port that may not otherwise have materialized.

2.6.2 Shipping Lines

The shipping lines and shipping line alliances have great bargaining power with both the port authorities and the stevedoring companies. The shipping lines and shipping line alliances have contractual relationships with stevedoring companies, rail companies and trucking companies. Shipping lines typically coordinate the movement of goods from point of origin to the final destination. Thus, the shipping line will choose a container terminal that will get containers to the end user at the most competitive rates and time-sensitive delivery. If there are problems with the intermodal facilities at one container terminal, the shipping line can elect to call at another container terminal to ensure that its customers' goods are delivered on time and at cost.

The development of container terminals gave the shipping lines more power. The shipping line can easily switch from one location to another, as container terminals have become homogenous. The standardized containers make it easy for shipping lines to relocate as the shipping line does not need a specially built terminal to load and unload its containers. To

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95 Long 170.
unload a ship at one terminal as opposed to another, does not require any special equipment. In addition, trucks and rail cars both have the appropriate equipment to handle the containers. Thus, the switching costs for the shipping lines are low.

Shipping lines have formed alliances and the biggest alliances are:

- **Hanjin Shipping/United Arab Shipping Independent Carriers Alliance**: CMA CGM Line, CSAV – (Compania Sud American de Vapores), Hanjin Shipping Company, Montemar Maritime and Zim Container.
- **New World Alliance**: APL, Hyundai Merchant Marine and Mitsui O.S.K.
- **Maersk Sealand**.
- **CKYHS Alliance**: COSCO Container Lines, “K” Line, Yang Ming, Hanjin Shipping and Senator Lines.

The alliances have significant power in negotiating rates with ports and stevedoring companies as the alliances represent a large buying group. In the POV for example, New World Alliance members use the services of P&O Ports at Centerm. The Grand Alliance uses the services of TSI Terminal Services Ltd. at Deltaport and Vanterm. It is probably no coincidence that Grand Alliance uses TSI Terminal Services, as Orient Overseas (International) Limited owns both TSI Terminal Services and Orient Overseas Container Lines.

### 2.6.3 Freight Forwarders

Individual exporters and importers typically do not have the prerequisite volumes to deal directly with a shipping line. They normally retain the services of a freight forwarder. Freight forwarders are the travel agents of the freight world. They will deal directly with the shipping lines to get the goods from the point of origin to the final destination, at the most efficient, cost-

effective mode of transport and routing. When business is bad for carriers, there seems to be a trend for freight forwarders to gain better deals with the shipping lines. However, though this may be the trend, only the big freight forwarders, like Kuehne + Nagel Seafreight and Panalpina, can influence the shipping lines as these companies forward a significant number of TEUs per annum to the shipping lines. Thus, the power these entities have with respect to a stevedoring company, is indirect as their relationship is with the shipping line. However, what a freight forwarder typically wants from a stevedoring company is equipment availability, low loss/damage, and convenient pick-up times.

2.6.4 Residents

Though not direct customers, residents near the ports are attempting to influence the development and the operations of a port. At the POV, for example, the Burrardview case illustrated how residents came together to lobby against the development of a concrete plant at the POV. The development of industrial facilities on prime waterfront property in a major urban setting, is not popular with residents. Resident’s needs, such as quiet nights, may be incompatible with the operations of a port. The Ports of Auckland are experiencing the same issues. With the demographics changing, port authorities together with stevedoring companies must not only address the issues on the terminal, but also offsite issues as well.

2.7 Threat of Substitutes

"Low to Moderate"

Although there are other modes of transportation for containerized goods, such as trucking and rail, these types are more practical for short hauls on the continent as opposed to the


98 Long 333.


101 Long 204.

102 Conversation with Rick Thompson of Ports of Auckland.
long haul that most deep sea container ships are capable of performing. Thus, the threat of these
types of modes of transportation to a container terminal operator is low.

2.7.1 Alternative Trading Routes

A new popular route for Asian exporters is to go through the Suez Canal, the
Mediterranean Sea, and the Atlantic Ocean as opposed to the Pacific Ocean and rail across to
Chicago. Presently, this threat is not great as world events make the Suez Canal a risky trading
route and, in addition, the depth of the Suez Canal does not allow certain types of ships to use it.

Shipping lines are starting to use the Panama Canal on a more frequent basis. A driving
force behind this development is that big retailers, like Wal-Mart, Kmart, Best Buy and others
have opened big distribution centres near east coast ports. With the development of these
large distribution centres also known as transloading centres, shipping lines have invested in
expensive all-water services from Asia to the east coast via the Panama Canal. At a transloading
centre, marine containers are emptied and the goods are transferred to trailers or land containers.
The shipping lines like the quick turnaround of marine containers, as there is a worldwide
shortage of marine containers. If this trend of developing transload centres on the east coast
of the US continues, this could lead to competition for west coast ports.

2.7.2 Other Terminals

The container industry was born out of the inefficiencies associated with the general
cargo industry. Until the development of the TEU, most general cargo travelled as loose items
and each item had to be packed in a cargo liner. To load and unload a ship was a labour
intensive operation. The cargo handling costs increased to about one-quarter of the total
shipping costs. If the general cargo industry could lower costs or exploit any weakness in the
container industry, then the exporter may be convinced to use the bulk cargo method. The
switching costs would not be great as the general cargo terminals are already built and serviced

via trains. The likelihood of the containers converting to general bulk cargo is low and therefore, the risk is low.

2.8 Bargaining Power of Suppliers

"High"

A container terminal is only one link in the transportation chain. A terminal assists in the delivery of goods from land to sea and vice versa. As such, a stevedoring company's role is one of facilitator. With respect to other modes of transportation, geographical direction is important. From North America to Asia, the substitute is limited to airlines. However, going south from the Pacific Northwest, the substitute modes of transportation would be airlines, trucking companies and rail companies. Depending on the size of the shipment, and the final destination, the cost may be cheaper, the same price or more costly. However, if the size of the shipment is large and the destination is great, the most cost effective means of transportation is through the use of a ship. Airfreight would deal more in specialty items and perishable goods. Presently, airfreight is not a threat to the container industry.

2.8.1 Rail Lines

Rail lines are one of the land components in the logistics chain. With the increase in TEUs passing through the ports, the rail line companies must also make economic decisions about whether to spend money to upgrade infrastructure capital at a port or at other customers' locations. The infrastructure would include increased rail lines to the port and increased rail lines for intermodal purposes.

US Staggers Act\textsuperscript{106} removed almost all barriers to commercial management of railroads. Since the enactment, the rail industry has 35\% less track, 32\% fewer locomotives, 25\% fewer railcars, 60\% fewer employees but 50\% more freight\textsuperscript{107}. The Canada Transportation Act of

\textsuperscript{105} Stopford 17.
\textsuperscript{107} Vickerman slide 105.
1996 attempted to provide Canada's two main rail lines, Canadian National Railway Company ("CNR") and Canadian Pacific Railway Ltd ("CPR"), with similar competitive regime as the Staggers Act gave the American rail lines. This act did not provide the same benefits as the Staggers Act, however, it did hasten the deregulation of rail costs.

Both CPR and CNR have reached an agreement with the US Bureau of Customs and Border Protection outlining the principles for targeting, screening and examining rail shipments transported by the Canadian carriers to the US. The principles include guidelines for collecting advanced electronic manifest information and installing imaging and radiation detection equipment at seven border crossings.109

A shipping line will typically arrange for delivery of goods to the nearest rail line hub location. At the hub, the merchant/importer will arrange for the delivery of the goods to the final location. This is called the spoke in the supply chain. This arrangement is commonly referred to as the "hub and spoke" arrangement. A rail line company must make a decision: increase the number of its container cars and the number of rail lines to handle the increased intermodal business or increase the number of general purpose cars to support the other demands the rail line companies may be experiencing from other sectors. In 1999, intermodal business for CNR represented only 16% of the rail lines revenue and for CPR, it represented 22%.110

The Ports of Everett, Seattle and Tacoma, together with the US Federal Government, the State of Washington and a number of cities and counties have funded the "FAST Corridor" project.111 The purpose of the project is to improve the efficiency, safety and reliability of Puget Sound's area road and rail networks. The project plans on spending $400 million US from 2000 to 2006.

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2.8.2 Trucking Lines

Trucking companies are another link in the logistics chain. Depending on the end location of the goods, the delivery of goods from the container terminal is split between trucks and rail and is approximately 40%/60%. Trucking companies compete with the rail lines for the shipment of containers to and from a terminal. However, presently, there is a shortage of truck drivers in North America\(^\text{112}\). This shortage has added to the cost of a container as demand for truck services exceeds supply by as much as 10%. The trucking companies can add a premium to its service and also, be selective with whom it services.

2.8.3 Labour

Labour affects a container terminal both directly and indirectly. Depending on the port, the port could own and manage the tug boat operations, like the Ports of Auckland\(^\text{113}\) or the tug boat operations could be contracted to a third party to handle the tug operations for all the terminals in a port, much like the POV. Although the labour is not directly affecting the operations of a container terminal, if there is a strike or shortage of tug boat operators, it will affect the operations of the terminal as the ships will not be able to dock at the terminal. This, in turn, would affect both the export and import markets.

Labour at the container terminal is typically unionized and the unions tend to be very strong\(^\text{114}\). The loading and unloading of a ship is a specialized skill and, with little competition nearby, the negotiating power that an union has in contract negotiations is great. There is a small pool of qualified workers, which gives the union power as there are no close competitors nearby to compete for the union members' jobs.

\(^{112}\) Scott Simpson, "Shortage of truck drivers will result in higher prices", Vancouver Sun, 17 May 2004: F1.

\(^{113}\) During a visit to Auckland, the Ports of Auckland provided a demonstration of their tugboats.

\(^{114}\) Long 212.
2.8.4 Insurance

The insurance market has become a concern in the stevedoring industry. Insurers have been insisting on improvements in risk control and they have increased insurance premiums. The increase was due in part to September 11, 2001. These increases have added approximately 50% to the terminal operator’s insurance costs. The benchmark for all-inclusive insurance was approximately US $1.50 per TEU for a single site operator in 2002.

Figure 11 - VPA Historic Insurance Costs

<table>
<thead>
<tr>
<th></th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
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<tr>
<td>Total Premium Amount</td>
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<td>$150</td>
<td>$154</td>
<td>$166</td>
<td>$280</td>
<td>$330</td>
</tr>
</tbody>
</table>

\[\text{Historical Premium Trend}\]

\[\text{Figure 11 - VPA Historic Insurance Costs}\]

115 Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects section 3.2.2.

116 Drewry Shipping Consultants Ltd., Global Container Terminals: Profit, Performance and Prospects section 3.2.2.
Figure 11 - VPA Historic Insurance Costs also illustrates that insurance, mainly on the property side, has increased significantly over the last few years. However, in a recent seminar hosted by Marsh Canada Limited, the representative suggested that the property insurance rates should be flat at worst, with a chance the rates may even decrease in 2004\textsuperscript{117}. The cost of insurance, and the terms insurance companies are placing on policies, make insurance a significant factor in operating a container terminal.

2.8.5 Off-Site Container Handling Facilities

With the cost associated with developing waterfront container terminals, consideration has been given to the development of efficient off-site container handling facilities. These facilities will typically be built near rail lines or spurs to facilitate easy access. The facilities can offer competitive rates to the stevedoring companies, which should in turn lower the companies’ overall costs associated with handling and storing containers. If a stevedoring company can lock a facility into a long-term contact, they will have a competitive advantage over its rival stevedoring company. These types of integrated off-site container handling facilities are a new concept and time will tell how efficient and cost effective they will be.

2.9 Overall Assessment

The container industry forecasts continue to indicate a significant increase in TEU traffic. This bodes well for stevedoring companies, shipping lines, rail companies and port authorities. However, with this growth come expansion pains. On the west coast of North America, there is already a capacity issue associated with the growth of the container traffic. The solution is not a quick or cheap proposition. In order to solve the container constraint issues, port authorities are trying to be innovative, such as finding off-site handling locations. In doing this, the port authority is adding value to the stevedoring companies and shipping lines as the off-site handling facilities add more capacity to the container terminal. This should be a cost-saving measure for the stevedoring company, which could be passed on to their customers.

2.10 Key Issues

Key issues facing VPA relate to ensuring that there is an alignment in modes of transportation in the global integrated logistics chain. VPA, through its Trade Development Department, must have the proper market intelligence, as VPA needs to deliver a consistent message to all of the POV’s stakeholders. If the trend for larger ships is a legitimate one, then VPA has to take that into consideration when building a new terminal or converting an existing bulk terminal. The size of ships impacts on container terminal facilities, yard space, gantry crane capacity and productivity, chassis logistics, computer systems and inland transportation\textsuperscript{118}. Presently, the shipping companies are ordering larger container ships to lower costs. Studies suggest that the largest ship designed, an 18,000 TEU ship, would have cost levels 16\% less than an 8,000 TEU ship\textsuperscript{119}. VPA has to determine that the signals the shipping lines are sending are correct in order to make the necessary capital investments in designing a terminal to handle such a large ship.

The land transportation component is an issue for VPA. The Canadian rail companies’ revenues from the container industry represent approximately 20\% of the overall revenues. If the container industry continues to grow, VPA has to convince the rail companies to expand their rail systems to accommodate the forecasted increase in container volumes. The investment should not be done incrementally, but rather, immediately as the infrastructure needs prompt attention. VPA needs to ensure that the market intelligence is correct with respect to the container growth forecast as it will be relying on that intelligence to convince the rail companies to expand their rail systems to meet the growth.

The other land transportation component is the trucking companies. VPA needs to work with the trucking industry to help solve the capacity issue with respect to a limited supply of qualified truck drivers. In addition, VPA needs to assist the trucking industry work with the Province of British Columbia to design proper trucking routes to and from the POV. The


\textsuperscript{119} O’Keefe 3.
trucking route issue is important as VPA wants to ensure that the TEUs can be delivered to and taken away from the POV efficiently.

An evolving issue that VPA is facing is the conflict between residents and the operations of the port. To increase productivity at the container terminals, there will be increased rail and truck traffic at the POV. This is incompatible with residential living. Even though the POV has been operating for over 200 years, new residential developments are causing issues with the operations of the POV. VPA will have to address the residents concerns when developing new terminals at the POV.

Given that there is no one company that can control all of these activities, VPA must provide an objective overview and leadership of the container industry to its stakeholders. Although VPA cannot dictate the size of ships, VPA can facilitate meetings between the various stakeholders in order to find a common solution to the alignment issue.
3 INTERNAL ANALYSIS

3.1 VPA Corporate Structure

VPA went through a corporate re-structuring in January 2004 as reflected in Figure 12 - VPA Corporate Structure. The Senior Vice President, Business Development retired on June 11, 2004 and VPA elected not to replace his position. There may be a minor re-shuffling of departments to reflect the retirement but there are no major changes anticipated to Figure 12 - VPA Corporate Structure. The re-structuring has been timely as VPA is in the process of moving and consolidating its main offices. Presently, VPA main offices are located on 5 (19, 20, 21, 23, 27) floors at 200 Granville Square, Vancouver, British Columbia, with a few ancillary offices located at various locations in the POV. In November 2004, VPA will be moving its offices to a VPA managed property located at the north end of the Vancouver Convention Centre. The seating plan has been finalized reflecting the structure set out in Figure 12 - VPA Corporate Structure.

The office move has been well organized. VPA has allowed all of its employees to provide input into the design of the new office. Also, the employees have provided input on what features should be included at the new offices. As a result of the employees' suggestions, several features have been added to the office such as a fitness centre, a large common lunchroom, and an outdoor patio. To provide staff with updates on the office construction, VPA has installed web-cameras in various parts of the new office, allowing employees to view the status of the construction from their desktop computers on a daily basis. The design of the office is open, with few individual offices aiming at removing the physical barriers that currently exist as a result of the main offices being located on several different floors.
VPA has 155 full time employees, approximately one third of whom are non-unionized. The International Longshore and Warehouse Union (Local 517, C.L.C.) represents the unionized employees. The number of employees increases from time to time as VPA hires students or term contract employees. VPA is an organization with strict guidelines regarding the delegated levels of authority. Each department is allowed to enter into contracts based on certain criteria being met, such as monetary limit, receiving multiple fee quotes, and issuing tenders (if required).

On the governance side, VPA has an outside Board of Directors. The nine-member Board is appointed pursuant to a formula set out in the LP. The three levels of government: the municipalities, the provincial government and the federal government each have rights to appoint directors. The Board of Directors is responsible for the stewardship of the VPA. The Board has the accountability for VPA’s overall management. There are 4 Board of Directors’ meetings
annually as well as ad hoc meetings, which are called on an as-need basis. The present Board of Directors is shown in Table 2 - VPA Board of Directors.

Table 2 - VPA Board of Directors

<table>
<thead>
<tr>
<th>NAME</th>
<th>TERM</th>
<th>APPOINTED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>David H.R. Stowe</td>
<td>3 Years 2002/03/01 to 2005/02/28</td>
<td>Minister / Users</td>
</tr>
<tr>
<td>George Adams</td>
<td>3 Years 2004/03/15 to 2007/02/28</td>
<td>Minister / Users</td>
</tr>
<tr>
<td>Greg Arason</td>
<td>3 Years 2004/03/15 to 2007/02/14</td>
<td>Minister / Users</td>
</tr>
<tr>
<td>Wayne Hartrick</td>
<td>3 Years 2002/03/01 to 2005/02/28</td>
<td>Municipalities</td>
</tr>
<tr>
<td>Sarah Morgan-Sylvester</td>
<td>3 Years 2004/03/15 to 2007/03/14</td>
<td>Province of BC</td>
</tr>
<tr>
<td>Edward Schreyer</td>
<td>3 Years 2003/03/01 to 2006/02/28</td>
<td>Prairie Provinces</td>
</tr>
<tr>
<td>Audrey Sojonky</td>
<td>3 Year 2002/03/01 to 2005/02/28</td>
<td>Minister</td>
</tr>
<tr>
<td>Bob Wilds</td>
<td>3 Years 2003/03/01 to 2006/02/28</td>
<td>Minister / Users</td>
</tr>
<tr>
<td>John Willcox</td>
<td>3 Years 2003/03/01 to 2006/02/28</td>
<td>Minister / Users</td>
</tr>
</tbody>
</table>

The President and Chief Executive Officer is charged with VPA’s day-to-day management. The President is responsible for the attainment of business objectives while ensuring that VPA fulfills its role as an effective instrument of advancing national, regional and local economic and social objectives. Presently, the President has four Vice-Presidents reporting to him.

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The Vice-Presidents, in addition to the responsibility for their own divisions, contribute to the overall senior leadership and direction of VPA through participation on the Management Executive Committee. This committee meets twice a year to ensure, among other things, that the Board of Directors’ mission and values are being implemented at the VPA.

3.1.1 Firm Infrastructure

The Board of Directors, with the assistance of the Executive, develops the mission and values for VPA. The Executive, with assistance from the Board of Directors and senior management, develops the objectives for VPA. Senior management, with assistance from the Executive, develop strategies to fulfill the objectives. VPA is a lean company with competent employees charged with the responsibility of managing the operation of the POV. In order to effectively perform these duties, VPA retains the services of consultants to provide the required services, with VPA employees overseeing the implementation of the contract.

To provide a better understanding of how each department contributes to the VPA, a hypothetical container lease negotiation will illustrate the role each department plays in the negotiations. In general, during the various stages of negotiations, VPA will enter into three types of agreements, the letter of understanding, the letter of intent, and the final documentation. The Executive will produce the letter of understanding and the negotiating team will produce the latter two agreements. However, prior to discussing how each department interacts, it is important to understand the role of the Executive.

The Executive, which includes the President and all the Vice-Presidents, will enter into high-level discussions with a stevedoring company. In these discussions, broad principles are discussed as opposed to detailed items. The Executive will provide the stevedoring company with VPA’s mandate, explain how the POV operates and provide any other information that the stevedoring company requests. The Executive will delegate the detailed negotiations to VPA’s negotiation team, the membership of which will vary depending on the complexity of the deal. The Executive will provide the negotiating team with parameters within which to negotiate, usually in a form of a letter of understanding between VPA and the stevedoring company. Typically, the core members of the negotiating team will be representatives from Finance, Real
Estate, Engineering, and Legal Services departments with other departments providing the appropriate supporting information. The negotiation team will report directly to the Executive.

During the high level discussions, the Executive may contact any department to obtain information. Nevertheless, there are a few departments that will be consulted to ensure the accuracy of the negotiations. Such departments are:

- **Shore Operations**: There are two employees in this department. The Manager is responsible for managing the shore operations of the POV and terminals by liaising with senior representatives from terminal operators, trucking companies, and rail companies to develop policies, procedures and systems that allow for effective and efficient shore operations.

  The Executive contacts this department to determine if the suggested throughput of containers can be handled given the existing rail and road capacity. The discussions will not be fruitful if, at the end, the land infrastructure could not support the stevedoring companies’ proposed development. The Manager is constantly analyzing this potential problem. In early 2004, it was taking longer to get goods from Vancouver to Toronto than across the Pacific\(^\text{121}\). The Manager worked with the rail companies and other stakeholders in an attempt to find a workable long-term solution to the congestion problem. The importance of this role is to prevent the free rider problem. No individual stakeholder is willing to pay for a comprehensive study of the rail issues relating to the POV. However, the Manager has facilitated the development of the rail study and each stakeholder agreed to contribute equally to the cost of the report. Hopefully, with the Manager’s continued involvement, the various stakeholders will work to find a common solution to the congestion issue.

- **Trade Development**: There are nine employees in this department. The Director is responsible for maintaining a current market share for the POV, particularly in the container business and for developing new markets, both nationally and internationally. The Director achieves this through the development of competitive marketing strategies and policies. As shown in Figure 13 - VPA Agent Network, the Director has agents working in Asia, Canada and the US in order to assist VPA develop new markets.

The Executive contacts the Director to assess whether or not the stevedoring companies’ TEU throughput claims are realistic. The accuracy of the throughput is relevant as the revenue model is partly based on this. The Director, through its agents, can ascertain whether the forecast is accurate as he is responsible for providing VPA with a forecast for container traffic.

Port Planning: There are four employees in this department. The Director is responsible for ensuring that long-term land use planning and development of Port facilities and VPA properties are managed efficiently and effectively.

The Executive contacts the Director to discuss how the proposed development impacts on plans for future POV expansion. The Director provides feedback on any potential issues that he may foresee with the proposed development. The issues could range from adverse public opinions to negative impact on another development being considered.
Business Development: There are five employees in this department. The Director is responsible for the development and implementation of a business strategy to increase revenue from cruise and non-traditional sources, as well as to explore new business opportunities and strategic projects with new and existing customers.

The Executive contacts the Director to determine whether the proposed development would interfere with any strategic projects that the Director has identified. If this is a conflict, the Executive will have to make a decision on which project should take priority.

Corporate Communications & Public Affairs: There are ten employees in this department. The Director ensures that proper communication on the status of the negotiations is provided to the public. The Director develops, directs, implements and maintains Corporate Communications & Public Affairs policies, programs and services to meet the requirements of VPA, its departments and its Board of Directors. The Director also develops and supports internal and external programs to enhance VPA’s public image and promotion of effective working relationships with senior levels of government, media, industry, public interest groups and individuals. During the entire negotiation process, the Director will ensure proper communications are given to the public. The Director will organize any open houses that may be required to provide the public with an opportunity to view and provide information on the proposed development.

With respect to the detailed negotiations, the main negotiating team typically has direct representation from the following departments:

- Finance: There are four employees in this department. The Manager is responsible for managing and developing effective systems for financial planning and capital budgeting, cash management, corporate risk management, and purchasing services.

In the lease negotiations, the Manager is responsible for ensuring that VPA obtains an appropriate rate of return on VPA’s assets. In doing so, the Manager will require information from other departments in order to assess the risk of the project and the likelihood of the projected TEUs volumes being achieved.
• Legal Services: There are five employees in this department. The Director provides advice to VPA’s staff, management, and Board of Directors on a full range of matters including those relating to contracts, statutory compliance, real property and corporate risk. The Director is also responsible for ensuring that all negotiations are documented properly.

The Director’s role begins at the commencement of the lease negotiations, ensuring that any term that is included in the documentation is allowed under the CMA, LP and VPA guidelines. The Director assists the lead negotiator in ensuring the appropriate documents are used.

• Real Estate: There are fifteen employees in this department. The Director ensures VPA’s real estate holdings are managed efficiently and effectively, and that Payment in Lieu of Taxes payments to neighbouring municipalities is cost effective. The Director also ensures corporate financial return targets from real property assets are met.

The Director plays a key role in the lease negotiations. With the responsibility to ensure that VPA is obtaining proper financial return targets, the Director works closely with the Manager, Finance to structure the documents to obtain the targeted financial return. The Director, Real Estate, together with the Director, Legal Services will finalize the documents after a letter of intent has been negotiated and signed.

• Engineering & Maintenance: There are twenty-nine employees in this department. The Director is responsible for providing leadership, direction and management for all aspects of the engineering and maintenance functions. The Director ensures that practices, procedures, and systems are in place, which enables VPA to meet its capital projects and port infrastructure objectives.

The Director assists in assessing and analyzing the stevedoring company’s proposed design, determining if the existing infrastructure is capable of supporting the proposal. If not, the Director provides the Manager, Finance with a cost estimate to upgrade the infrastructure. The Manager can then update the financials to determine if the project is still financially feasible.
Though not directly involved in the negotiations, the following departments provide valuable inputs in the negotiation process:

- Harbour Master: There are fifteen employees in this department. The Harbour Master is responsible for managing the overall administration, control, supervision and maintenance of good order in the POV waters and the coordination of smooth, safe and efficient marine operations. The Harbour Master advises the negotiating team on whether the proposed development will interfere with marine operations. If the proposed development does interfere, then the Harbour Master provides advice on how to minimize the interference.

- Security: There are six employees in this department. The Director is responsible for assisting in the protection of VPA’s assets and in the investigation, reporting and follow-up of losses. This position provides primary liaison between VPA and its customers, municipalities, police agencies and other federal agencies relating to security. As described in the Marine Transportation Security Act\(^{122}\), this position will fulfill the role of Port Security Officer and perform other related duties as required.

The Director will provide advice on issues surrounding the proposed development security features, especially in light of the ISPS code. The ISPS code came into force on July 1, 2004. Any breaches that occur at the POV or at one of its container terminals will have severe repercussions to a stevedoring company and to the POV. In theory, if a container terminal is non-compliant with the ISPS code, any ship that docks at the terminal will not be able to dock at a US port. A shipping line may not be willing to take that risk. Accordingly, the shipping line may elect not to dock at a non-compliant terminal.

- Environmental Programs: There are five employees in this department. The Director, Environmental Programs develops, directs, implements and maintains environmental policies, programs and services to meet the requirements of VPA, its departments and its Board of Directors. The Director manages strategic initiatives and creates mutually beneficial environmental programs with customers and stakeholders. The Director also

establishes effective communications and working relationships with senior levels of government, industry, public interest groups and individuals.

The Director will provide guidance to the negotiating team on the best practices to minimize any environmental degradation that may result from the construction of the proposed development. The Director will assist in developing a baseline environmental plan to illustrate the environmental condition of the property prior to the stevedoring company taking possession. At the end of the term, the stevedoring company must clean the property to the base line level.

Assuming the lease negotiations conclude, there is one final department that has input - internal audit. This department is not involved in the direct negotiations, but provides a valuable service in attempting to ensure fairness in the negotiation process. The department’s role is described as follows:

- Manager, Internal Audit: In this department, there is only the Manager. The general role of the Manager, Internal Audit is to plan, conduct and report risk-based reviews of accounting, financial, management and operating controls, and appraise their adequacy, effectiveness, compliance with legislation, adherence to authorized policies and procedures and sound business practices.

If the Manager audits the final documents, she will provide an assessment of the negotiations process to ensure that all the necessary procedures have been followed. The Manager reviews the negotiation process to determine whether the negotiations were fair and whether the stevedoring company received any preferential treatment to the detriment of other tenants.

The Container Development Department is responsible for the design and construction of new container terminals. There are five employees in this department. Once the Executive determines that there is a need for a new container terminal, this department begins the overall design process. However, there has been some overlap between this department and the negotiating team. Although the Container Development Department’s mandate is to bring the new container terminal into operation, the Director is also involved in negotiating with the
prospective stevedoring company. Therefore, in the future, the container negotiating team may become part of this department.

3.1.2 Support Departments

These departments do not have any direct role in the negotiation process. Although they are more support orientated, these departments' roles are critical as they allow the other departments to function efficiently. The departments have the following responsibilities:

- Administration: There are nine employees in this department. The Manager, Administration is responsible for managing the corporate document management system and administration functions by developing, implementing and maintaining policies, systems and procedures that provide a high level of service, and effective and efficient operations. The Manager is playing a pivotal role in office move from to Canada Place.

- Human Resources: There are five employees in this department. The Director, Human Resource is responsible for providing leadership, direction and management for all aspects of the human resources function in a proactive manner. She also ensures that policies, procedures and systems are in place, which allow for the effective use of VPA's human resources in support of VPA's business objectives.

- Information Services: There are twenty-one employees in this department. The Director, Information Services is responsible for developing and overseeing the implementation of information technology strategies to meet business objectives. The Director participates in the strategic planning of systems and makes recommendations on systems requirements.

- Accounting: There are fourteen employees in this department. The Manager is responsible for maintaining payroll, accounts payable, and accounts receivable systems. The Manager also ensures that policies, procedures and systems are maintained to ensure that financial activities are achieved.
3.2 Subsidiaries

Through its subsidiaries, VPA has more flexibility. The subsidiaries are not subject to the same rules and structure that VPA is subject to. Presently, VPA has four wholly owned subsidiaries. They are Canada Place Corporation, Port Vancouver Ventures Ltd., Port Vancouver Holdings Ltd., and Port Vancouver Enterprises Ltd. Each subsidiary has its own board of directors and officers. In addition, Port Vancouver Ventures Ltd. has entered into joint ventures with private entities to create Coast 2000 Terminals Ltd. and Modalink Vancouver Gateway Distribution Hub Ltd ("Modalink").

An example of the flexibility that the subsidiaries provide VPA is the new development called Axis, on the banks of the Fraser River. As stated earlier, the POV has limited container capacity at its container terminals. In order to assist the stevedoring companies, VPA, through its subsidiary, Port Vancouver Ventures Ltd. and in joint venture with a private British Columbian company, formed the joint venture called Modalink. Modalink developed Axis, an integrated container hub facility. The risks associated with developing an integrated container hub facility, were too great for a private company to undertake. However, VPA saw the advantage and benefits of Axis. According to the recently retired Senior Vice-President, Business Development, Axis was "...a step outside the box..."123. Axis’ first tenant is Coast 2000 Terminals Ltd., a forest product export company, which is another joint venture of VPA.

The development of Axis has helped reduce some of the congestion at the container terminals. Axis is similar to the transloading centres except for one major difference, the marine containers are returned loaded to the shipping lines. At Axis, the container is unloaded and loaded within a matter of hours with export products. Since Coast 2000 Terminals Ltd. is the only tenant, the containers are packed with forest products. This allows stevedoring companies more space at the terminal. Typically, a stevedoring company would have a container freight station at the terminal for loading and unloading containers. The cost savings are great as it costs about $500 to create a TEU slot at the terminal compared to about $12 for a slot inland124.

123 Daniels, Terminal Velocity 14.
124 Daniels, Terminal Velocity 14.
VPA, through its subsidiaries, assists in the strategic development of off-site facilities to enhance the POV. Taking this progressive step of assisting in the development of Axis adds value for all VPA’s stakeholders. It shows that VPA is willing to look at alternative structures to make the POV a more efficient place to do business. Presently, there is no such development at either the Port of Seattle or the Port of Tacoma.

3.3 Transportation at the POV

VPA assists in the efficient in the delivery of goods in the logistics chain. There are several transportation industries that play a key role at the POV. VPA needs to ensure that the industries are working together so that the logistics chain is functioning effectively.

3.3.1 Shipping Lines

With a natural deep harbour, VPA can market the POV to all shipping lines. VPA recognizes the importance of the shipping lines to the POV's business. VPA provides the shipping lines a wharfage rebate based on the total TEUs the shipping lines unload and load at the POV. If the shipping lines dock their ships at Centerm and then dock at Vanterm, the combined volume of TEUs is calculated and the rebate is delivered to the shipping line. The percentage for the wharfage rebate increases for First Port of Call shipping lines. The POV provides an incentive for a shipping line to make the POV its First Port of Call. The First Port of Call is defined as the first port called in North America after leaving Asia. Typically, a ship will unload more TEUs at the first port of call and thus there is an incentive to VPA and the stevedoring company to have the shipping line to select the POV as their First Port of Call.

3.3.2 Rail Companies

The Government of British Columbia’s recently sold BC Rail ("BCR") to CNR. As a result of the sale, there will be only two main rail companies that service the POV — CPR and
CNR. Burlington Northern Santa Fe ("BNSF") and Southern Railway of British Columbia ("SRBC") both provide service to the POV. These two rail companies are small in comparison to CPR and CNR. However, each line plays an important role due to the location of trackage. CNR uses a portion of BNSF's rail line to access the south shore of the POV. Both CNR and CPR use a portion of BCR's rail, which is not included in the sale to CNR, to access Roberts Bank.

In the POV's south harbour, CPR owns the majority of the tracks and, in the north harbour, CNR owns the majority of the tracks. Therefore, if a stevedoring company has a contract with a customer that uses CNR as its land vehicle, and the stevedoring company is located on the south harbour, there could be a capacity issue with CNR. CNR can only take so many containers out on its own line without running rights on CPR rails. This adds cost and complexity to the marketing of the terminal.

Though the POV has two main rail companies serving it, there is still a need to improve the rail infrastructure. Mr. Ritchie, the President and Chief Executive Officer of CPR, recently stated that Canada has built up a transportation infrastructure deficit that is starting to hold back the country. In addition, Mr. Ritchie cited a report by the American Association of State Highway and Transportation Officials that stated that by spending over $4 billion a year in the U.S. rail system, over a 20-year period, would save shippers $401 billion, highway users $635 billion, and highway costs of $27 billion. With that investment, he feels that the railroads would be able to make a real difference in service to shippers. CPR has been working with shipping lines, ports and stevedoring companies to find a way to maximize the use of the existing infrastructure. As a result, CPR has recently introduced a rail capacity allocation system. CPR will allocate to each of the shipping lines it serves an annual import container volume

125 "Sale of BC Rail Finalized", The Vancouver Sun, 15 July 2004: D2.
128 "CPR boss calls for industry-government summit", Canadian Sailings, 10 May 2004: 19.
129 "CPR introduces rail capacity allocation to manage growth in west coast import containers", Canadian Transportation & Logistics, 3 June 2004: 10.
through the Vancouver Gateway based on past volumes and growth projections. CPR will supply sufficient railcars to meet the allocated volume.

VPA’s President and Chief Executive Officer has echoed CPR’s concern, when he stated the following at the VPA’s 2003 Annual General Meeting:

Without investment and regulatory changes from all levels of government, without investment in the nation’s transportation industries and without co-operative spirit from all who make their living by international trade the competitive position of this port will inevitably begin to erode.  

The Canadian rail companies have recognized the importance of having timely movement of goods across the US and Canada border. They are working with the US and Canadian customs agencies to finalize an agreement to further enhance secure rail access to the US. One of the goals of the agreement is to ensure that the US Bureau of Customs and Border Protection Agency keeps America safe and yet, at the same time, facilitate the flow of trade between Canada and the US.

3.3.3 Trucking Companies

In order to provide more efficient truck arrival times at the terminals, in 2001, VPA developed the Container Terminal Scheduling (“CTS”) system. The CTS system is a truck reservation system designed to provide a given number of time slots during gate hours for a trucking company, who holds a valid POV permit, to make a reservation and be assured of being attended to. In developing the CTS system, VPA recognized that the trucking industry needed more flexibility in scheduling times to arrive at the various terminals.

Although VPA has been proactive in making arrival times at the terminals more efficient, trucking companies are concerned about the road system to and from the POV. The Greater

Vancouver Transportation Authority ("GVTA"), in its 2005-2007 Three-Year Plan & Ten-Year Outlook, acknowledges that there is a need to protect trucks from the effects of mounting traffic congestion. This is especially true since it is anticipated, that by 2021, cargo transported by trucks will grow by over 50%\textsuperscript{133}. In 1999, the BC Trucking Association estimated that the cost factor to the trucking industry due to congested roads alone would be $500 million annually\textsuperscript{134}. GVTA also recognized that the border crossings times must be improved in order to improve the flow of freight to the US. The Federal and Provincial Government of British Columbia committed to spend $211 million to improve the four border crossings near Vancouver\textsuperscript{135}.

Knowing that there are traffic issues already, VPA has taken an active role to address the traffic issues relating to the development of Terminal 2 at Roberts Bank. Although Terminal 2 will not be in operation for at least another 8 years, VPA is working with the provincial Ministry of Transportation to look for ways to improve the truck flow\textsuperscript{136}. With the expansion, the already congested road system will only get worse if corrective actions are not taken in advance. VPA’s President and Chief Executive Office, Captain Gordon Houston, advised that VPA would be asking its Board of Directors to commit to millions of dollars to support road and rail projects improvements to Highway 17, the construction of the Delta portion of the South Fraser Perimeter Road and improved rail crossings\textsuperscript{137}. He summed up VPA’s transportation goal as follows:

Ultimately, our goal is to find an integrated port, road, rail transportation solution in the Lower Mainland to facilitate the efficient movement of goods and people throughout the region.

\textsuperscript{133}"Three-Year Plan and 10-Year Outlook", \textit{Greater Vancouver Transportation Authority} 19 February 2004: 5 & 6.

\textsuperscript{134}Greater Vancouver Transportation Authority 50.

\textsuperscript{135}Greater Vancouver Transportation Authority 24.

\textsuperscript{136}Maureen Galyas, “Sites chosen for port expansion at Roberts Bank” \textit{The Delta Optimist}, 14 June 2004: 1.

\textsuperscript{137}Jan Westell, “Port looks to proposed rout to address truck traffic concerns”, \textit{The Delta Optimist}, 24 July 2004: 6.
3.3.4 Tugboat Operators

The tugboat operators are responsible for ensuring that the container ships dock at the various terminals. Without efficient and effective tugboat operations, a container terminal would not be able to function as the container ships would not be able to dock. At the POV, there are two companies that provide tugboat services to the container ships, Seaspan International Ltd. and Rivtow, a SMIT Company. Rivtow provides service in the inner harbour and Seaspan provides services at Roberts Bank.

During the recent tugboat operator strike, only Seaspan’s operations were effected. The strike essentially shut down the container terminal at Roberts Bank, as the container ships could not dock there138. (VPA is not directly involved with the contract negotiations. Canadian Merchant Service Guild represented the tugboat operators and the Council of Marine Carriers represented Seaspan). The strike showed how vulnerable the port is to tug boat operators. Several in-coming ships were diverted to the Ports of Seattle and Portland, once again showing the homogenous nature of the container industry. A new collective agreement for a three-year term was struck, which gave the VPA the comfort of knowing that there would be labour peace for at least the next three years at Roberts Bank. When the contract with Rivtow expires, hopefully, a strike can be averted. However, if there is another strike between Rivtow and the tugboat operators or another one in three years’ time, POV’s reputation as an efficient place to do business may be in peril. Labour unrest concerns shipping lines as they want to be able to deliver their goods in a secure and timely manner.

3.4 Container Capacity

As discussed in detail in Section 2.2, the demand for transporting goods in containers is growing. In 2003, the POV handled 1.54 million TEUs and that amount is expected to grow to 5 million TEUs by 2020139. During the first six months of 2004, POV total container shipments

139 Korstrom S8.
increased 7% from 756,879 TEUs in 2003 to a new record of 809,459 TEUs\textsuperscript{140}. Assuming all the expansion projects are completed, the total TEUs handling capacity at the end of 2005 will be 1.97 million TEUs. Using the targeted productivity of 6,500 TEU per acre per annum and a total container terminal acreage of 308 acres at the POV, POV’s theoretical container capacity is 2 million TEUs per annum. Thus, when expansions are complete, based on the assumption of 6,500 TEUs per acre per annum, the POV will have reached its container capacity.

In order to meet the forecasted container demand, VPA is actively supporting renovations to existing container terminals, conversion of existing terminals to container terminals and construction of new container terminals. With respect to renovations, two existing container terminals, Centerm and Vanterm, both located in the heart of Vancouver’s Burrard Inlet, recently announced major expansions and renovations to their terminals to increase the productivity at their terminals. In 2003, Vanterm commenced construction to increase throughput from 435,000 TEUs per annum to 535,000 TEUs per annum\textsuperscript{141}. Centerm’s operator, P&O Ports Canada Inc., recently announced that it plans on spending $130 million over an eighteen-month period to double terminal capacity from 360,000 TEUs per annum to 720,000 TEUs per annum\textsuperscript{142}. Both companies feel that they will not have any difficulty filling the increased capacity.

With respect to conversion, a general cargo operator has commenced a feasibility study to determine if it is economically feasible to convert the existing cargo terminal to a container terminal. VPA has been working closely with the terminal operator together with other stakeholders such as rail companies, municipalities, and the provincial transportation department to assist in ensuring a complete feasibility study is performed. The final decision is expected late 2004.

Finally, with respect to expansion, VPA has commissioned a feasibility study to determine the feasibility to build another container terminal at Roberts Bank called Terminal 2.

\textsuperscript{140} Brian Morton, “Container traffic up at Port of Vancouver”, \textit{Canada.com network}, 29 July 2004, \url{http://www.canada.com/search/story.htm?id=0d97e1cf-665b-42d2-9d95-04488fa7e422}.

\textsuperscript{141} Gerry Bellett, “Terminals to expand container handling”, \textit{Vancouver Sun}, 19 February 2004: D2.

\textsuperscript{142} Donville D1.
Terminal 2 will be 90 hectares (225 acres) and take 5 years to construct. The anticipated opening date is 2012. Since the proposed location of Terminal 2 is not federal real property, the decision to purchase the land and then build the new terminal is contingent upon receiving approval from a variety of stakeholders, such as Tsawwassen First Nation, the Corporation of Delta, the Province of British Columbia, and the Department of Fisheries.

3.5 Property Taxes

VPA is not subject to municipal by-laws and therefore does not have to pay provincial property taxes. However, VPA does pay an amount in lieu of property taxes pursuant to the Payment in Lieu of Taxes Act ("PILT")144. Due to various exemptions, the amount paid under PILT is less than what VPA would pay under the provincial property tax regime. Still, in 2003, VPA contributed $4.5 million in PILT payments to the local municipalities, as opposed to investing these funds in port infrastructure145.

VPA's right not to pay provincial property taxes does not extend to VPA's tenants. Stevedoring companies, as occupiers of federal real property, are subject to the provincial property tax regime and accordingly, must pay provincial property taxes. The valuation of federal real property, the basis upon which taxes are calculated, is a difficult issue and there has been much discussion on this aspect. Table 3 - POV Property Tax illustrates the percentage of the municipal revenue that taxes collected from the VPA's tenants contribute to the municipal revenues. In the City of North Vancouver, VPA's tenants pay $2.25 for every $1.00 of services they use, compared to 58 cents paid by residential property owners146. Accordingly, based on the latter statistics, VPA's tenants believe that they contribute too much towards municipal revenues.

143 Galyas 1.
145 Don Cayo, "Port an important local, provincial and national asset", Vancouver Sun, 17 May 2004: F3.
146 Alan Daniels: "Port of Vancouver contributes $118 million in taxes to eight municipalities", Canadian Sailing, 7 June 2004, 17.
The British Columbia Provincial Government has acknowledged this issue and has introduced the *Ports Property Tax Act*\(^{147}\) and the related regulations to provide property tax relief for port users. P&O Ports Canada Inc. recently stated that one of the reasons for its expansion at Centerm was the Provincial Government’s legislation to cap municipal taxes\(^{148}\).

VPA is placed at a competitive disadvantage if the property taxes are too high as this could be another negative factor in a stevedoring company’s decision to move to the POV.

**Table 3 - POV Property Tax**

<table>
<thead>
<tr>
<th>City</th>
<th>% of Municipal Revenue</th>
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<td>Coquitlam</td>
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<td>Delta</td>
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</table>

### 3.6 Greater Vancouver Gateway Council

VPA is a member of the Greater Vancouver Gateway Council (“GVGC”). GVGC is comprised of senior executives from industry and government who subscribe to a common vision - that Greater Vancouver become the Gateway of Choice for North America\(^{149}\). In a 1995 report, GVGC made recommendations to be included in Canada’s Marine Policy\(^{150}\). In that report,

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148 Donville D1.


GVGC recommended that port authorities should have expanded borrowing powers to match the Ports of Seattle and Tacoma’s borrowing powers. The report also suggested that the requirement to make PILT payments to the municipalities be eliminated. Ironically, the report recommended that the port authorities pay a dividend to the Federal Government. The report suggested, however, that the dividend be calculated in accordance with a strict predetermined formula.

In 2003, the GVGC commissioned a study on the transportation corridor called the “Major Commercial Transportation Study” (“MCTS”), which discussed the rail issues facing the Greater Vancouver Regional District. The study concluded that there are seventeen investment improvement projects that need to be addressed. Surprisingly, none of the seventeen projects are located at the POV but rather in the Greater Vancouver region. According to the Railway Association of Canada, the cost for these improvements is anticipated to be $5.7 billion.

Thus, being involved in the VGCC, VPA can advocate changes to the transportation system to make the POV a more efficient place to do business. This is one example of how VPA adds value to its tenants.

3.7 Strategic Fit

VPA has a value added/differentiation strategy. In order to determine if VPA is effectively using its strategy, Table 4 - Generic Strategy will be used to see how well VPA is implementing its strategy. The following table lists nine components of Generic Strategies and also lists the key attributes to each of them. In the middle of the table, the “Ranking” column provides the score given to each component, with one representing a true “Cost Based” Strategy and ten representing a true “Differentiation” Strategy.

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153 Table based on class notes, Dr. Ed Bukszard, MBA 607 - Business Strategy, January 2004.
Table 4 - Generic Strategy

<table>
<thead>
<tr>
<th></th>
<th>Cost Based</th>
<th>Ranking</th>
<th>Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Strategy</td>
<td>Low Cost/Adequate Quality</td>
<td></td>
<td>High Quality/Adequate Cost</td>
</tr>
<tr>
<td>R&amp;D Expenses</td>
<td>Low R&amp;D</td>
<td>7</td>
<td>High R &amp; D</td>
</tr>
<tr>
<td>Structure</td>
<td>Centralized</td>
<td>3</td>
<td>Decentralized</td>
</tr>
<tr>
<td>Decision Making</td>
<td>Less Autonomy</td>
<td>8</td>
<td>Autonomy</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>Economies of Scale</td>
<td>7</td>
<td>Economies of Scope/Flexible</td>
</tr>
<tr>
<td>Labour</td>
<td>Mass Production</td>
<td>8</td>
<td>Highly Skilled/Flexible</td>
</tr>
<tr>
<td>Marketing</td>
<td>Comparative/Push</td>
<td>7</td>
<td>High Cost/Pioneering/Pull</td>
</tr>
<tr>
<td>Risk Profile</td>
<td>Low-Risk</td>
<td>3</td>
<td>High-Risk</td>
</tr>
<tr>
<td>Capital Structure</td>
<td>Leveraged</td>
<td>8</td>
<td>Conservative</td>
</tr>
</tbody>
</table>

3.7.1 Product Strategy

VPA has been highly innovative in attempting to make the POV function efficiently. As the world changes, VPA has been a leader in adapting to the changing world. For example, in 2000, VPA saw the need to assist its clients, i.e., tenants, clear their cargo through customs. After performing its due diligence, in January 2002, VPA, which was the first Canadian port authority to do so, purchased a sophisticated mobile Vehicle and Cargo Inspection System ("VACIS") to scan for contraband in containers\textsuperscript{154}. In assisting the Canada Customs Agency in its inspection process, VPA provided assistance to its stakeholders as the customs inspection time was shortened. This is just one example of the innovative measures VPA has undertaken.

As part of the move to the new offices, VPA elected to implement a corporate wide goal of becoming a "paperless office". The Information Services Department is responsible for
ensuring that this goal is met. VPA’s document management system, Docunet, is the main filing system for the paperless office and Information Services are working to ensure all employees are trained to use it. Information Services requires all emails, correspondence, documents considered to be corporate record to be scanned into Docunet, so there is less need for tangible storage space.

The Environmental Department developed another innovative service. To assist VPA’s tenants in developing their environmental policies to meet the various applicable Federal, Provincial and Municipal environmental laws and regulations governing the tenants, the Environmental Department formed a committee called the Vancouver Port Environmental Managers Committee. The Environmental Department develops environmental policies, such as Emergency Awareness and Readiness, that are published, free of charge, on the Vancouver Port Environmental Managers Committee website. This committee allows the tenants to obtain information on environmental laws and regulations that may affect their business in a cost effective manner. This is a new initiative, which is unique to VPA.

3.7.2 R&D Expenses

VPA spends both money and time on research and development. Since VPA is in the business of managing a world-class port, it requires VPA to understand the issues facing, not only Canada, but also the world. In order to keep abreast of world events, VPA actively participates in numerous committees. For example, VPA sponsored the Association of Canadian Port Authorities 2004 ports valuation workshop called "Issues in the Valuation of Port Property", held June 24th and 25th 2004 in Vancouver, British Columbia. VPA gathered experts from around the world to speak on ports' land valuation and return on investment issues. VPA also holds memberships in a broad array of associations, including the American Association of Port Authorities, the Association of Canadian Port Authorities, the Canadian Manufacturers and Exporters Association, the North Shore Water Industrial Association, the Western Transportation

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Advisory Council, the Van Horne Institute, the GVGC and the Canada China Business Council. Being a member in these associations, VPA gathers information that assists in making the appropriate changes at the POV to make it a more efficient port.

The Security Department is primarily responsible for the POV’s security. However, when implementing security procedures, the Director attempts to add value to the POV. VPA and all the stakeholders at the POV established the Security Stakeholder Committee for the purpose of identifying emerging security concerns and developing effective security initiatives. Since VPA was familiar with the requirements of ISPS, it knew that there was a requirement for photo identification. As a result, VPA developed the Port Community Photo I.D. Instead of each terminal issuing individual port passes, VPA issues passes for all users of the POV. Each company is responsible for background checks and VPA is the custodian of the records and the computer system. This is a substantial savings for each terminal operator, since they do not need to have a stand-alone system, but rather, can connect to the port-wide system, the cost of which is shared among the stakeholders.

3.7.3 Structure

Figure 12 - VPA Corporate Structure illustrates the hierarchical nature of VPA. VPA’s centralized structure is inconsistent with its value added strategy. The reason for the centralization is mandated through the CMA. With this structure, VPA is accountable to the Federal Government. The structure is centralized as a result of the entire office, except for agent offices as shown in Figure 13 - VPA Agent Network, being located in Vancouver. With the move to the new office in November 2004, all the departments will be on one floor.

3.7.4 Decision Making

The decision-making flexibility at VPA works well with its value added strategy. Each department is delegated with certain authority. For example, there are limits on how much each department can spend to retain a consultant. However, within the authority granted, an individual department can make budget decisions independent of other departments. VPA has an

internal auditor who ensures the rules are being followed. Thus, there are checks and balances to ensure compliance with the rules.

3.7.5 Manufacturing

VPA's dual management function provides for some economies of scope. VPA can have certain departments provide advice for the management of federal real property and also on the management of the port. However, VPA's management of federal real property is where economies of scale assist VPA. In managing the property, VPA builds relationships with all the stakeholders located in the POV. The Real Estate Department ensures that the leases are in good standing. The department has mechanisms in place to ensure renewals, rent reviews and amendments to leases are completed in a timely manner. Also, this department works with other departments to ensure that the tenants are receiving value. For example, Real Estate and Shore Operations are working with the container terminals and rail companies for ways to solve the rail issues, not in isolation to one terminal, but for the benefit of the POV as a whole. This method should assist the stakeholders to make informed short-term and long-term financial decisions with respect to their operations at the POV.

3.7.6 Labour

The Human Resources Department attempts to attract highly qualified individuals to work at VPA. Once employed, employees are encouraged to continue their education through university courses or training programs. The continuing education program pays for tuition and textbooks and provides time off for employees to take university programs to advance their careers at VPA. In addition to university programs, VPA encourages its employees to take a variety of courses, such as computer courses to increase their efficiency and productivity at work. In addition, the Human Resource Department is looking at VPA's demographics, with the attempt to retain employees and to avoid the regrettable loss of key employees. The department is looking at progressive, innovative retention strategies, such as flexible working hours to encourage employees to remain working at VPA.

As mentioned, approximately two thirds of VPA staff are unionized. In 2003, the union and management, eight months prior to the expiry of the collective agreement, entered into a new
collective agreement for a five-year period, as opposed to the traditional three-year agreement. Management and union staff sit on several joint management committees such as Emergency Preparedness, Learning Crew and Employee Equity. There has been no strike at VPA since the 1970's. Union and management relations appear to be stable.

VPA has several programs in place to assist in a team-building concept. To build the soft skills, VPA has organization-wide training that all employees, union and non-union, take together. This helps create a common language and mindset within VPA. In addition, VPA has a variety of social programs, such as personal care days, employer charitable matching program, employee and family assistance program, fitness reimbursement program, and smoking cessation program to name a few. In 1991, VPA developed the Spirit Survey. This survey measures the morale of the employees. On a one to seven scale, in 2003, VPA received an impressive 5.7 out of 7.

3.7.7 Marketing

VPA does extensive marketing, which fits nicely with its value added strategy. The President is constantly marketing the POV to municipalities, provincial and federal government agencies. In addition, to market the features of the POV to countries that comprise the POV’s main trading areas of Asia and Oceania, VPA’s Trade Development Department has set up an global agent network as shown in Figure 13 - VPA Agent Network. The agents use a pull strategy, which is marketing directly to the end consumer to induce them to use the product. Among other things, the agents provide the various stakeholders, such as exporters, importers, shipping lines, and freight forwarders, with marketing information about the POV. In addition, the agents provide value to VPA’s customers by assisting them with the development of trade opportunities, relationship building and market intelligence. VPA’s employee at its newly created Chicago office provides assistance to shippers which are considering a strategic alternative North American gateway for the growing container trade with Asia and Oceania. With the information, hopefully, the shipper will request that the shipping line use the POV as opposed to the Ports of Seattle and Tacoma when transporting the shipper’s goods.
The POV has seen its cruise industry eroded to the Port of Seattle's benefit. In order to improve the cruise industry at the POV, VPA assisted, together with industry stakeholders, other port authorities and the BC coastal communities in the development of the “Cruise BC Initiative Program”\(^{158}\). Hopefully, these groups can collaboratively develop and market a “Made in B.C.” cruise strategy.

### 3.7.8 Risk Profile

Typically, with a value added strategy, a company is a risk taker. However, VPA does not fit the traditional role as the CMA mandates that VPA be self-sufficient. Having that mandate, VPA cannot undertake activities that are risky. In addition, the CMA essentially states that VPA can only be involved in port-related activities. The long lead-time that is required to develop a new container terminal is a risk. If VPA elects to build T2 at Roberts Bank, the container terminal will not be in operations for at least eight years. During that eight-year period, many events could change. The size of ships may or may not increase. VPA’s market intelligence forecasts have to take into consideration all possible events in order to mitigate the risks associated with the development of a new container terminal.

### 3.7.9 Capital Structure

The Consolidated Balance Sheet shows that the present capital structure is conservative, with an approximate $40 million debt and $42 million in cash. Most of the capital projects are funded through cash flow. However, if VPA proceeds with the expansion at Roberts Bank, the debt will grow at a rapid pace, reaching the $225 million borrowing limit set out in the LP in a short period.

VPA’s value added/differentiation strategy fits nicely with the differentiation strategy as shown in Table 4 - Generic Strategy. VPA does not see itself as a follower but rather a leader in an effort to make the POV an efficient place to do business. In doing so, VPA envisions that the

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POV is a place where imported goods can easily be transported to the hinterland of Canada and where exported goods can easily be transported to the final destination.

3.8 Financial

3.8.1 VPA’s Financial Statements

The Board of Directors approved VPA’s 2003 consolidated balance sheet, the consolidated statement of operations and retained earnings and the consolidated statement of cash flows in June 2004. Copies of the financial statements can be found at VPA’s web page159.

On the consolidated balance sheet, VPA’s total debt is presently only about $40 million, well below the limit set out in the LP. This statement also shows that VPA has $42 million in cash. Although this appears to be attractive, if VPA undertakes the development of Terminal 2 at Roberts Bank, the remaining $185 million in borrowing, and $42 million cash would be used up as the expansion is anticipated to cost $700 million. If VPA used its borrowing limit and cash to construct Terminal 2, VPA would not be able to continue to develop the POV effectively. With continuing obligation to pay PILT and the annual stipend, VPA would only be able to build new facilities at the POV through the limited cash flow as shown in the consolidated statement of operations and retained earnings.

The consolidated statement of operations and retained earnings shows that the 2003 net income prior to extraordinary items (insurance claim was successful) has fallen compared to 2002. The expense ratio for VPA is approximately 75% as VPA’s operating revenue was $102,908,000 and the net income was $26,833,000. If VPA were able to lower its expenses, namely the PILT and annual Federal stipend, this ratio would improve and would allow VPA to expand the POV. The operating revenue consists mainly of lease revenue, which also includes berthage and wharfage as the tenants collect this revenue on behalf of VPA. The main expense is operating and administrative expenses, consisting of the wages (including pensions and

retirements expenses), office rent, legal and insurance expenses. Maintenance expenses have been decreasing as result of VPA making its tenant responsible for this cost.

In addition to the expense ratio, VPA looks at three key performances indicators ("KPI"), which are profit margin, operating return on investments and debt to equity ratio. Table 5 - Key Performance Indicators provides the 5-year summary of the three ratios. The reasons for the decline in the profit margin and operating return on investments in 2003 were due to increase in operational and administrative expenses, including pensions, retirements, legal, insurance and security expenses. The increase in operational and administrative expenses is not expected to continue, with insurance, retirement, legal and security expenses all expected to decrease in the future.
Table 5 - Key Performance Indicators

<table>
<thead>
<tr>
<th></th>
<th>Dec-99</th>
<th>Dec-00</th>
<th>Dec-01</th>
<th>Dec-02</th>
<th>Dec-03</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating Revenues (OR)</strong></td>
<td>75,569</td>
<td>84,175</td>
<td>89,160</td>
<td>92,030</td>
<td>97,677</td>
</tr>
<tr>
<td><strong>Operating Expenses (OE)</strong></td>
<td>49,315</td>
<td>49,093</td>
<td>55,685</td>
<td>58,352</td>
<td>65,987</td>
</tr>
<tr>
<td><strong>Net Operating Income (NOI)</strong></td>
<td>26,254</td>
<td>35,082</td>
<td>33,475</td>
<td>33,678</td>
<td>31,690</td>
</tr>
<tr>
<td><strong>Net Income before Federal Stipend (NI)</strong></td>
<td>21,518</td>
<td>28,849</td>
<td>34,852</td>
<td>29,907</td>
<td>32,847</td>
</tr>
<tr>
<td><strong>Interest Expense (IE)</strong></td>
<td>2,943</td>
<td>2,784</td>
<td>2,776</td>
<td>2,726</td>
<td>2,255</td>
</tr>
<tr>
<td><strong>Operating Assets (OA)</strong></td>
<td>390,195</td>
<td>379,185</td>
<td>408,427</td>
<td>469,242</td>
<td>454,343</td>
</tr>
<tr>
<td><strong>Cash Flow from Operations</strong></td>
<td>14,019</td>
<td>65,161</td>
<td>54,573</td>
<td>48,060</td>
<td>46,317</td>
</tr>
<tr>
<td><strong>PILT Payments</strong></td>
<td>5,513</td>
<td>4,752</td>
<td>2,074</td>
<td>4,476</td>
<td>4,548</td>
</tr>
</tbody>
</table>

**Key Performance Indicators**

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<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Profit Margin % (NOI/OR):</strong></td>
<td>34.74%</td>
<td>41.68%</td>
<td>37.54%</td>
<td>36.59%</td>
<td>32.44%</td>
</tr>
<tr>
<td><strong>Operating ROI % (NOI/OA):</strong></td>
<td>6.73%</td>
<td>9.25%</td>
<td>8.20%</td>
<td>7.18%</td>
<td>6.97%</td>
</tr>
<tr>
<td><strong>Debt Coverage Ratio:</strong></td>
<td>8.31</td>
<td>11.36</td>
<td>13.55</td>
<td>11.97</td>
<td>15.57</td>
</tr>
</tbody>
</table>

* *In 1999, VPA took approximately $18 million and invested it in short investments.

** *In 2001, VPA had an audit performed on its PILT payments. The audit determined that there had been over payments. Therefore, the 2001 PILT payment was reduced to reflect the previous overpayments.*

However, overall, VPA’s financial picture looks good and the forecast is for this trend to continue.

### 3.8.2 Income Statements for a container operation

When making a decision on leasing a container terminal, VPA and a stevedoring company must make a series of business decisions. Table 6 - VPA and Stevedoring Company Income Statements looks at the financial factors each party would analyze prior to entering into a
lease of a container terminal. No figures have been provided due to the confidentially agreements that VPA has with its stevedoring companies.

For VPA and the stevedoring companies, wharfage and berthage fees are the same for all container terminals. The fee structure is set out in VPA’s Fee Detail List. This list is amended from time to time, with the amendments applying to all terminals. With wharfage and berthage fees being fixed, the negotiation between VPA and a stevedoring company is on what percentage of the fees collected will the stevedoring company be entitled to keep.

Table 6 - VPA and Stevedoring Company Income Statements

<table>
<thead>
<tr>
<th>VPA</th>
<th>Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue:</td>
<td>PILT</td>
</tr>
<tr>
<td>Berthage</td>
<td>Terminal Maintenance</td>
</tr>
<tr>
<td>Wharfage</td>
<td>Depreciation</td>
</tr>
<tr>
<td>Lease</td>
<td>Total Expenses</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>Net Income</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stevedoring Company</th>
<th>Operating Expenses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue:</td>
<td>VPA Lease</td>
</tr>
<tr>
<td>Wharfage</td>
<td>Terminal Staff Expense</td>
</tr>
<tr>
<td>Rail Traffic Surcharge</td>
<td>Equipment Maintenance</td>
</tr>
<tr>
<td>Container Handling</td>
<td>Infrastructure Maintenance</td>
</tr>
<tr>
<td>Total Revenue</td>
<td>Property Tax</td>
</tr>
<tr>
<td>Cost of Sales</td>
<td>Insurance</td>
</tr>
<tr>
<td>Labour Expenses</td>
<td>Computer System</td>
</tr>
<tr>
<td>Vessel Operations</td>
<td>Marketing</td>
</tr>
<tr>
<td>Gate &amp; Yard Operations</td>
<td>Other Overhead</td>
</tr>
<tr>
<td>Workshop Operations</td>
<td>Total Operating Expense</td>
</tr>
<tr>
<td>Rail Operations</td>
<td>Total Income before Depreciation</td>
</tr>
<tr>
<td>Total Labour</td>
<td>Depreciation Expense</td>
</tr>
<tr>
<td>Energy Expenses</td>
<td>Net Income</td>
</tr>
<tr>
<td>Electricity</td>
<td>Fuel</td>
</tr>
<tr>
<td>Fuel</td>
<td>Total Energy</td>
</tr>
<tr>
<td>Total Labour and Energy</td>
<td></td>
</tr>
<tr>
<td>Gross Profit</td>
<td></td>
</tr>
</tbody>
</table>

The revenue side of the Income Statement is sensitive to the number of containers being handled at the container terminal. Typically, as remuneration for performing the stevedoring services pursuant to the berth corridor agreement, the stevedoring company will receive a
percentage of the wharfage that VPA charges to the shipping lines. This represents a risk to both VPA and the stevedoring company. Although the percentage figure is fixed, the volume of containers is the variable component. For VPA, the split between the guaranteed rent from the lease and the variable component under the berth corridor agreement will depend on VPA’s appetite for risk for this particular lease deal and the overall risk VPA has with the other container terminals. The percentage of wharfage is typically on a declining scale, with VPA taking a higher percentage on lower volumes of TEUs handled. As the volume increases, VPA’s percentage of the wharfage fee decreases. This provides an incentive to the stevedoring company to increase its productivity to allow for more TEUs to be handled at its terminal.

The risk component is the reason why the forecast for container volume is so important during the negotiation process. VPA’s Executive works closely with the Trade Development Department in order to substantiate the container figures. If the throughput of containers is not achieved, both VPA and the stevedoring companies revenues’ will decline. The parties have an incentive to market the POV as a place to do business. In doing this, both parties assist each other in achieving their respective financial goals.
4 ISSUES

The container industry has been growing and is expected to continue to grow in the foreseeable future. However, in order to attract global stevedoring companies to locate (or expand) to the POV, VPA must have answers to various issues.

4.1 Canada Marine Act

The CMA is VPA’s governing statute. Through the CMA, VPA was formed pursuant to its LP. Although the intention of both the CMA and LP was to make VPA a commercial entity, there are several restrictions in the two documents that potentially limit VPA’s ability to develop the POV.

4.1.1 Borrowing Restrictions

The CMA empowers the Federal Government to establish borrowing limits for all Canadian port authorities. The borrowing limits are established pursuant to the respective port’s letters patent. Presently, VPA’s borrowing limit is $225 million. Once VPA reaches that limit, VPA cannot undertake any further capital expansion other than through cash flow or through the stevedoring company financing the project. Capital expansions would include such things as strategic land purchases and infrastructure projects.

The rationale for the borrowing limits is to reduce potential liabilities to the Federal Government stemming from VPA’s activities. Since VPA only manages the federal real property, any borrowing should be supported by VPA’s cash flow as opposed to a charge on federal real property. The principle being that federal real property should not be pledged as security, as it would derogate from the Federal Government’s assets.

The capital borrowing restrictions highlight the economic generator versus the commercial generator issue. If VPA is truly considered an economic generator for the good of Canada, VPA should be able to tap the world capital markets to allow it to build the necessary infrastructure needed to further the development of Canada’s hinterland. The POV is one
component of the transportation logistics chain and a chain is only as strong as its weakest link. If the development of the POV is hindered due to VPA’s inability to tap the world’s capital markets, VPA may not be able to continue to develop the POV.

If VPA cannot illustrate that it has the available capital to expand the POV, stevedoring companies may view this restriction negatively. The POV could, therefore, be considered a stagnant port in comparison to the Ports of Seattle and Tacoma, which do not have these restrictions.

4.1.2 Prohibition on Grants from Federal Government

The present interpretation of the CMA is that the Federal Government is not able to make any appropriation to VPA to allow it to discharge an obligation or debt. In other words, the Federal Government cannot give money to VPA to pay off any of its debt. If VPA proceeds with a development using financing, the Federal Government cannot make an appropriation to VPA to discharge the debt. This restriction forces VPA to wait to access Federal infrastructure funding even though the immediate construction of the infrastructure projects may be for the betterment of Canada as a whole. The Ports of Seattle and Tacoma can access US Federal Government grants at any time. This gives the American ports a competitive advantage over the POV.

4.1.3 Gross Revenue Charge

VPA is mandated to remit annually to the Federal Government a percentage of its gross revenue. Since VPA is managing federal real property on behalf of the Federal Government, there is an expectation that the Federal Government should receive a return on its property. Since the payment of the annual stipend is mandatory, not permissive, VPA has to forego this revenue, instead of investing the money into infrastructure at the POV, thereby, hopefully, increasing the productivity of the POV and bettering Canada as a nation. In 2003, the gross revenue charge that VPA paid to the Federal Government was $4,548 million. The Ports of Seattle and Tacoma do not have to pay a stipend or income tax to US Federal Government. This gives the American ports a competitive advantage over the POV.
4.2 Property Taxes

With respect to property taxes, there are two issues facing VPA. First, the requirement to make PILT payments to municipal governments is directly opposite to the requirement of the Ports of Seattle and Tacoma. These ports are taxing authorities as they have the availability to raise taxes. Again, the mandate to make PILT payments places VPA at a competitive disadvantage compared to the Ports of Seattle and Tacoma.

The second issue is the provincial property tax regime. Corporations, whether port tenants or non-port tenants, have to pay property taxes. However, the question is what is a fair tax rate. As shown in Table 3 - POV Property Tax, as result of high property taxes, VPA’s tenants contribute a significant amount of money to the local municipal governments. They believe that port property taxes account for a disproportionate amount of the budgeted tax revenues for the neighbouring municipalities. If the property tax burden becomes too great, then a stevedoring company may view this as a negative and decided not to locate at the POV.

4.3 Transportation Network

A port is just one link in the global logistics chain. In order to provide an efficient supply chain, the POV must have workable rail and road connections. VPA does not have direct control over these modes of transportation. VPA can only work with the various parties to encourage them to improve the transportation chain. VPA needs to ensure an efficient land transportation system as its customers, the stevedoring companies, are the ones that co-ordinate rail/truck deliveries of commodities with the arrival of vessels. Therefore, if one of the components is absent, this impacts on the cost and operational efficiencies of the whole transportation supply chain.

The US ports and government agencies are actively expanding the rail and road transportation corridors. However, though there has been acknowledgement for the need to increase the POV’s rail and road capacity, there is no FAST Corridor program in place to improve the rail and road network at the POV.
4.3.1 Rail

The MCTS study identified three issues facing the rail transport in the lower mainland, namely:

- The lack of industrial lands available in urban settlements: This makes it difficult for rail companies to expand.
- The lack of compatibility with adjacent uses: This relates mainly to residential developments near rail operations. Rail companies have been asked to find ways to reduce noise from their operations and not to operate at night. These requests place additional operational burdens on the rail companies.
- Competition with other rail users: Other users of rail lines, such as Via Rail, West Coast Express, Rocky Mountaineer, and Amtrak Cascades place operational constraints on the rail companies as all the parties are competing for the use of the rail lines.

If these issues are not resolved, VPA will have a difficult time marketing the POV to stevedoring companies as the rail capacity is one of the factors in determining a stevedoring company's productivity level. If the rail system is not improving, it may be hard for a stevedoring company to increase its productivity, and thus, its revenues.

4.3.2 Roads

The road system is an important factor in the global logistics chain. Trucking companies claim that they have lost money due to inefficient road systems. GVTA has acknowledged the importance of the transportation in the economy, which is summarized in the following quote:

There is no question that it is important that Greater Vancouver’s transportation system functions effectively. It is also important to the provincial and national economies that the region and its ports remain competitive. At the same time, it is apparent that the magnitude of investment required will need both federal and provincial funding to implement the scale of the program\textsuperscript{160}.

There is a dilemma here. GVTA acknowledges that there are issues, but the last sentence summed up the dilemma concisely: funding. There is a need for upgrades to the transportation system, but there is no long-term partnership funding in place to commence a regional transportation upgrade to allow, not only the POV, but also the rest of British Columbia’s and Canada’s industries to be competitive.

4.3.3 Tugboats

The tugboat operators are an important link in the logistics chain as container ships require the assistance of tugboats to moor. VPA does not have direct control over the tugboat operators contract as the contract is with another entity. However, if the tugboat operators go on strike, the logistics chain is weakened. The latter point was highlighted in the recent tugboat operator strike. Deltaport was essentially shut down, which caused delay in delivery of exports.

4.4 Border Security

In the future, as illustrated in Figure 7 - 2020 Container Destinations Forecast, VPA is contemplating that more of the container traffic will be transported to the US. If the forecast is correct, then the border security between the US and Canada will become an increasingly important issue. The CSI initiative and the recent agreement between CNR, CPR, and the U.S. Bureau of Customs and Border Protection Agency has helped with the flow of containers to the US.

With these initiatives in place, the efficient transportation of containers from Canada to the US should continue to flow smoothly. However, if for any reason, the border security becomes congested or the US places more security measures on incoming containers, it will be difficult for VPA to advise its stakeholders that goods can be easily and efficiently shipped across the border. Shipping lines, together with global stevedoring companies, may look to the US to deliver cargo and set up business respectively.
4.5 Regional Ports

The five major ports on the west coast of British Columbia are all operated independently. The POV, Fraser River Port and the Port of Prince Rupert are all competing for container business as each has recently announced expansions to their container terminals. Although, on the face of it, competition is good, there may be some synergies obtained if there was only one port authority or if the port authorities developed a long-term strategic plan for the development of the respective west coast ports. The plan would take into consideration where certain terminals should be located given a variety of factors, such as road and rail issues, depth of the port, and location to exports, to name a few.

Given the high cost to develop a container terminal, and assuming that the ports are to be considered economic generators in the best interest of Canadians, ports may find it more practical to develop a regional plan to locate various terminals in strategic locations as opposed to competing for the same container business.

4.6 Container Terminal Design

The design of a container terminal is critical in the efficient operations of a container terminal. There are many factors to take into consideration when designing a container terminal. If the shipping industry's signals are correct and the mega-ships are the trend of the future, then the POV's already congested land logistic issues will be magnified.

Along with the land logistics issue, the issue of the size of cranes is also a concern. Traditional cranes cost around $8 million CDN. To order a larger crane, without the assurance that the new mega-ships are going to be built, is a difficult decision for a port and a stevedoring company to make. The size of the ship also dictates the dredging requirements of a port. If the ship requires greater depth, then a port authority must make a decision on whether to dredge, if need be, in advance to ensure its tenants, the stevedoring companies, can service their clients, the shipping lines.
4.7 Facilitator

The lead times required for the implementation of the necessary changes to make the POV a more efficient port are lengthy. There are risks in developing a container terminal. VPA has to make the decision to commence construction of a new terminal based on market intelligence forecast eight years in the future. Many things could change during the eight years. Not only is there a risk in the forecast, there are also risks that the necessary changes to the CMA and industry infrastructure developments may not proceed or take longer to implement than planned.

In 1995, VPA assisted GVGC in preparing a report on how to make ports operate more efficiently. Some of the recommended changes have not been enacted. Since then, VPA has continued to make similar recommendations to various government departments and private companies. CNR and CPR have stated that there is a need for better rail connections, not only at the POV, but also along the gateway to eastern Canada, to ensure that the rail companies can continue to provide service to the POV. The trucking industry together with GVTA have stated that there is a need for better roads in the Greater Vancouver area to allow the ports to function more efficiently.

The new Minister of Transport will require time to understand his new role. He will also need time to assess the issues and to make the appropriate recommendations to his minority government for any changes to improve the transportation corridor. If the Opposition Party does not support any recommendations, then a recommendation that requires Federal Parliament’s approval may not be approved, as the new government does not have a majority to pass the recommendation on their own.

There needs to be an organization with the vision to continually ensure that the vision to make the POV a more efficient port will allow it to be considered an economic generator for the rest of Canada.

These issues are not insurmountable. However, if the issues are not addressed, they may limit VPA’s ability to market the POV as an efficient, dynamic port.
5 RECOMMENDATIONS

The demand to transport goods in containers has been growing. In order to meet this demand, VPA must have tools available to move quickly to take advantage of any opportunity to expand its container capacity. With the flexibility to move quickly, this will send signals to the stevedoring companies that VPA is ready, willing and able to meet the challenges that the container terminal industry faces.

5.1 Legislative Changes

The CMA’s financial obligations and restrictions place VPA at a competitive disadvantage when compared to the Ports of Seattle and Tacoma. These two ports have the right to tax, to use market financial instruments to raise potentially unlimited amounts of capital and to access federal grants. In doing so, these ports can respond quickly to the needs of the container industry and develop the required infrastructure.

VPA does not have the flexibility to respond quickly. VPA, in conjunction with the Canadian Association of Port Authorities, should lobby the Federal Minister of Transport to remove the limits on private market borrowing or at least, consider increasing the borrowing cap. With a $225 million borrowing cap, VPA cannot undertake many capital projects on its own. The cost alone to build a new berth at Roberts Bank is over $200 million. This development, assuming no financial contribution from a stevedoring company, would use all the borrowing limits under the LP and VPA would not be in a position to respond to new capital expansions.

Along with the previous recommendation, VPA should also request that it be allowed to raise capital through preferred financing vehicles, much like the Ports of Seattle and Tacoma do. These capital vehicles could be tax-exempt bonds or any other vehicles approved by Canada Revenue Agency. This would lower the cost of borrowing for Canadian ports, thus putting them on par with American ports.

If Canadian ports are truly considered as economic generators in the best interests of Canadians, then the requirement to make an annual stipend payment should be removed. American ports are not required to make such a payment. The money that otherwise would be
used to make the annual stipend payment could be used to assist in any capital expansion at the POV. The rationale behind the annual stipend was that the federal government should receive a return on its land from the port authorities. However, the federal government does receive a return on its investment as the POV supports nearly 27,000 jobs plus adds over $7.3 billion to Canada’s gross domestic product. By removing the annual stipend payment and allowing VPA to invest that money directly into the POV, the Federal Government will not receive a direct benefit from the use of its assets, but rather, through increased economic development at the POV, the Federal Government should see greater employment and greater trade, which should increase the Federal Government’s tax base.

The prohibition of the Federal Government making an appropriation to VPA to discharge an obligation or debt should be removed. As owner of the POV, the Federal Government should not be prohibited from making an appropriation to VPA in order to allow VPA to improve the efficiency. If the restriction was removed, the Federal Government should receive an indirect return on its investment due to increased employment at the POV and increased traffic through the POV, which should increase the tax revenues of the Federal Government.

5.2 Property Taxes

With property taxes, there are two issues: provincial taxation and PILT. The issue surrounding property taxes has been very topical, with British Columbia government introducing the Ports Property Tax Act to limit the amount of property taxes that VPA’s tenants have to pay. Though this Act is a step in the right direction, the act does not address the issue of valuation of federal real property. Federal real property is subject to various restrictions such as a tenant can place a mortgage only on its leasehold interest and the tenant’s lease is subject to expropriation and lists a of regulatory requirements from the Department of Fisheries, Environment Canada and other government bodies. VPA should continue to work with the British Columbian Government to determine a fair way to value federal real property that reflects restrictions that are placed on federal real property.

VPA has been making PILT payments to its eight neighbouring municipalities. This is opposite to what the Ports of Seattle and Tacoma do as they have the right to collect property taxes. In turn, the American ports use that tax money to assist in the infrastructure development
of its respective ports. This requirement again restricts that amount of money available to VPA. VPA should recommend that the PILT payment be eliminated or at least, respect to unoccupied submerged lands that consume no services from the municipality, PITL payments be exempted with respect to those lands.

5.3 Transportation Network

At the Ports of Seattle and Tacoma, the FAST Corridor project identified the need to improve the transportation corridor in the Puget Sound area, which includes Seattle and Tacoma. Not only did the FAST Corridor project identify the needs, the project also received the necessary funding from all levels of government to commence the development of the project. In Greater Vancouver, the GVGC and the GTVA have both acknowledged the need to improve both rail and road infrastructure in Greater Vancouver. However, there has been no consensus on who should fund the projects or a formula on how each stakeholder should contribute to the projects.

VPA, through its representation on GVGC and other associations, should continue to recommend to the Federal and Provincial Governments the need for capital investment in roads and rails, in not only in Vancouver, but also along the transportation corridor that connects British Columbia to the rest of Canada. In doing so, the parties should develop a formula to fund the projects. Government should also have private railway companies at the negotiation table to ensure that the railway companies' capital investment projects align with the goals of VPA and GVTA. VPA, through its Shore Operations Department, is working with the stakeholders to develop a transportation strategy for the POV. This process should continue but, there needs to be a mechanism to ensure that funding for the essential projects can be achieved.

During the negotiations with the various stakeholders, VPA can provide facts to encourage the stakeholders that the investment in the POV also provides an economic return to them. The benefit to the Canadian economy is tremendous. With a proper transportation system, the logistics chain can function efficiently. Without a proper rail system in place, the importers in eastern Canada may not receive their goods in a timely manner or the Prairie exporters may not get their goods to export markets in a timely manner. VPA needs to impress upon the stakeholders that through working jointly on the infrastructure development, with each party
contributing their fair share of capital, the logistics chain can be improved to meet the desired needs of the stakeholders.

5.4 United States and Canada Border Crossing

With VPA’s goal of having more goods shipped to the US, the smooth border crossings become even more important. VPA should continue to invest in security measures and to purchase state of the art equipment, such as the VACIS, to illustrate that the POV is progressively looking for means to make it more secure.

VPA should encourage Canada Customs Agency to work with VPA and its stakeholders to find procedures to ensure the secure deliver of goods. The CSI with the U.S. Customs and Border Protection Agency is an example of a process of speeding up the delivery system. However, once the goods leave the POV, the other stakeholders must have procedures in place to make sure the goods remain secure. CNR and CPR have been working with the U.S. Customs and Border Protection Agency to make the crossing times shorter. VPA should work with the railway companies and the respective custom agencies to help formulate procedures to have secure delivery of goods between the two nations.

5.5 Regional Ports

VPA worked with the other ports to develop the Cruise BC Strategy that will hopefully assist all ports in British Columbia. Building on this success, VPA should continue to work with other ports to develop a new long-term strategic plan for the development of ports in British Columbia. This plan would include where a new container yard should be located. There may be areas of joint operations, like the Axis development. VPA, through its subsidiary, developed an off-site container facility on leased lands from the Fraser Port. This development has assisted in lowering the number of trucks on the road as containers are loaded and unloaded at Axis and Axis is located next to a rail spur line.

These type of developments, Cruise BC and Axis, illustrates that VPA has the vision to make, not only the POV a more productive and efficient port, but all the ports in British
Columbia. VPA should continue to provide its leadership in developing a regional port strategy for the benefit of the ports as a whole.

5.6 Container Terminal Design

VPA needs to work with the shipping lines and the stevedoring companies to determine the forecast in ship design. If the shipping lines are sending mixed signals to the ports, then the ports will be faced with the difficult challenge in properly designing a container terminal. VPA should continue to talk to the shipping industry and to the stevedoring industry to determine the likelihood of mega-ships being built. When building Terminal 2, it will be more economical for VPA to have the terminal built to handle the larger ships now as opposed to dredging and reinforcing the berth to handle the larger ships at a later date.

5.7 Facilitator

There needs to be a strong facilitator with the vision that ensures that the POV as Canada’s gateway is enhanced. VPA would be the logical entity to push for changes to the CMA and the transportation corridor to make the POV a more efficient port. VPA has an agent network which provides it with the latest market intelligence. With this network in place, together with being involved with many associations, VPA can be the entity that provides a consistent message to the stakeholders, whether the stakeholder is a government or a private company. There needs to be coordination in the development of the logistics chain.

The development of a new container terminal does not only include the terminal, but also, the necessary land transportation system. VPA should continue to advocate changes to encourage the rail companies to expand their infrastructure to support the new container terminal. In addition, VPA should continue to work with the GVTA, the Provincial Government and Federal Government to improve the existing road system to allow for the timely delivery of goods to the POV. The changes to the rail lines and road system take time to plan and money to construct. If the planning is done in conjunction with the planning of the new terminal, then hopefully, the various improvements could be completed at the same time to ensure efficient delivery of containers to the appropriate parties.
In being the facilitator, VPA should be able to demonstrate to the stevedoring companies that VPA is actively looking to ways to improve the POV, thus making the POV the port of choice for development of a container terminal in the Pacific North-West.
LIST OF ACRONYMS

“ACI” means the Advanced Commercial Information initiative.

“BCR” means the British Columbia Railway.

“BNSF” means the Burlington Northern Sante Fe Railway.

“Burrardview” means Burrardview Neighbourhood Association v. Vancouver (City).

“CMA” means the Canada Marine Act.

“CNR” means the Canadian National Railway.

“Constitution” means the Canadian Constitution Act.

“CPR” means the Canadian Pacific Railway.

“CSI” means the Container Security Initiative.

“CTS” means the Container Terminal Scheduling System.

“GVGC” means the Greater Vancouver Gateway Council.

“GVRD” means the Greater Vancouver Regional District.

“GVTA” means the Greater Vancouver Transportation Authority.

“KPI” means the Key Performance Indicators.

“LNG” means Liquefied Natural Gas.

“LP” means the Vancouver Port Authority’s Letters Patent.

“ISPS” means the International Ship and Port Security Code.

“MCTS” means the Major Commercial Transportation Study.

“Modalink” means Modalink Vancouver Gateway Distribution Hub Ltd.

“NAFTA” means the North American Free Trade Act.

“NHB” means the National Harbours Board.

“PILT” means the Payment in Lieu of Taxes Act.

“POV” means the Port of Vancouver.

“SRBC” means the Southern Railway of British Columbia.

“TSA” means the Terminal Service Agreement.

“TEU” means a twenty-foot equivalent unit.

“TGS” means terminal ground slots.

“US” means the United States.

“VACIS” means the Vehicle and Cargo Inspection System.

“VPA” means the Vancouver Port Authority.

“VPC” means the Vancouver Port Corporation.
BIBLIOGRAPHY

An Act to amend the National Harbours Act, the Government Harbours and Piers Act, the Harbour Commission Act, the Canada Shipping Act and the Fishing and Recreational Act, R.S.C. N-8 180-81-82-83, c.121.


Bellet, Gerry, “Terminals to expand container handling”, Vancouver Sun, 19 February 19 2003.


Canada Marine Act, 1998, c.10 An Act to amend the National Harbours Act, the Government Harbours and Piers Act, the Harbour Commission Act, the Canada Shipping Act and the Fishing and Recreational Act.


Cayo, Don, “Port an important local, provincial and national asset”, Vancouver Sun, 17 May 2004: F3.


Constantineau, Bruce “Prince Rupert plans $500m port expansion”, Vancouver Sun, 27 July 2004: A1.

Conversations:
  Nolan Heuchert, Assistant VP, Marsh Canada Limited, 22 March 2004, Insurance Round Table Discussion – VPA.
  Rick Thompson, Manager Real Estate, Ports of Auckland, 28 April 2004.

Damas, Philip, “How much bigger will boxships get?”, American Shipping Journal of International Logistics, 4 June 2004
<http://www.americanshipper.com/paid/MAY01/how_much_bigger.asp>.


Daniels, Alan, “Port of Vancouver contributes $118 million in taxes to eight municipalities”, Canadian Sailing, 7 June 2004: 17.

Donville, Christopher, “P&O Ports to spend $130 million to double terminal capacity”, 
Vancouver Sun, 24 March 2004: D1.


Drewry Shipping Consultants Ltd., “Global Container Terminals : Profit, Performance and 

Drewry Shipping Consultants Ltd., “World Container Terminal, Global Growth and Private 

Fairplay Daily News Service, “Canada goes beyond ISPS requirement”, 27 May 2004, 
<www.fairplay.co.uk.>.


Freightgate, “Steamship Alliances”, 15 July 2004, 

Gaudreau, Richard The Canada Marine Act – Beyond Tomorrow, Vancouver: Vancouver Port 

Galyas, Maureen, “Sites chosen for port expansion at Roberts Bank”, The Delta Optimist, 14 

Greater Vancouver Gateway Council, “Recommendation for Canada’s Marine Policy”, August 

Greater Vancouver Gateway Council, “Major Commercial Transportation System, Rail Capacity 
Greater Vancouver Regional District, “Air Quality Management Plan”,
 <http://www.gvrd.bc.ca/air/planning_plans.htm>.


Green, Andrew, “Marine Vessel Air Emissions: Environment Canada Efforts”, Environment Canada, 9 June 2004,


Jones Act, Mar.2, 1917, Ch.145.


Lewis, Brian, “Prince Rupert terminal is a go”, Vancouver Sun, 18 June 2004.


National Harbours Board Act, R.S.C. 1936 C.42, section 3(1).


Simpson, Scott, “Shortage of truck drivers will result in higher prices”, Vancouver Sun, 17 May 2004, F1.


Vancouver Port Authority:

Annual Report, (Vancouver: Vancouver Port Authority 2002).

Annual Report, (Vancouver: Vancouver Port Authority 2003).

Container Terminal Scheduling.

Financial Statements.

Port Security Newsletter.


West Coast Marine Security Newsletter, “Security Funding $115 million over 3 years”, May 2004, Volume IV.