



THE VAN HORNE INSTITUTE

Western Canada's Rapidly Expanding Inland Ports: Accelerating Regional Economic Growth

The Van Horne Institute
Alan Field, Contributing Editor for JOC

Throughout North American history, international trade has been dominated by the activities of the great seaports situated along the world's great oceans, especially along the Atlantic and Pacific. Recently, however, the inland ports of North America, Europe, and elsewhere have assumed a growing role generating jobs and economic growth. Inland ports are specialized locations developed to serve intermodal transportation networks. Ordinarily located along Class 1 railroad lines and major road networks, inland ports offer intermodal transfer facilities and international trade processing and other services. They may be linked to specific seaports. Distribution centres and other warehousing are generally co-located with inland ports, even on site.

According to a report by Jones Lang LaSalle, a professional services and investment management firm specializing in real estate, "An inland port is a hub designed to move international shipments more efficiently and effectively from maritime ports inland for distribution" elsewhere. "Think of the logistics of inbound freight as a barbell. At one end, inbound containers flood into a seaport, spreading across local storage facilities as they are unloaded. If they aren't moved quickly enough from the port, they create a bottleneck that bogs down the entire distribution cycle as containers wait longer to get off ships, to get into warehouses, and to get back out and onto trucks and trains for final shipment."

Thanks to ongoing, dramatic improvement in transportation and logistics technologies, the major distribution processes that formerly needed to be managed at seaports can now be managed – or co-managed – at various locations across the entire supply chain, including at various inland ports that were long thought of as too distant geographically to play a key role in the transportation and distribution of goods not just in their immediate vicinity but to distant locations.

The Expansion of Major U.S. Inland Ports

In the United States, the Alliance Global Logistics Hub, near Fort Worth, Texas, is considered the foremost example of a multifaceted inland port. Serviced by the Fort Worth Alliance Airport – the world's first dedicated industrial aviation facility, and the FedEx Southwest Regional Sort Hub, it is the largest U.S. Foreign Trade Zone, in terms of foreign goods admitted. The 18,000-acre Alliance development, which encompasses nearly 37 million square feet, has attracted more than 425 corporations, and over 44,000 employees. According to Jones Lang LaSalle, among other U.S. cities widely recognized as providing full-fledged inland ports are Houston, Chicago, Kansas City, St. Louis, Atlanta, Memphis, Columbia (SC), Charlotte (NC), and California's Inland Empire (Western Riverside County and southwestern South Bernardino County.)

Looking to the future, here are just some of the many inland port initiatives that are being developed and expanded within the U.S.:



- **Logistics Park Kansas City:** This 1700-acre master-planned distribution and warehouse development is anchored by BNSF Railways' newest intermodal facility. Launched in 2013, the facility will offer additional transportation savings and direct access to a heavy-haul corridor through the U.S. Midwest.
- **The International Inland Port of Dallas (IIPOD):** This public-private partnership, which will take at least 30 years to complete, serves as the third phase of ambitious plans for the North Texas region's intermodal development (building off the huge DFW Airport and Alliance Global Logistics Hub). IIPOD is a key driver in making Dallas the premier logistics and distribution centre in the U.S., officials say, and it is a catalyst for investment and job growth. Covering 234,000 acres and encompassing 12 municipalities, IIPOD will benefit from the proximity of multiple interstate highways and two Class 1 railroads (Union Pacific and Burlington Northern Santa Fe (BNSF)), as well as the confluence of Interstates 35, 45, 20 and the future Loop 9.
- **Appalachian Regional Port:** When it opens in 2018, this new inland port in northwest Georgia will be directly linked by a 388-mile rail route to Georgia Ports Authority's Garden City Terminal near Savannah, Georgia, thus creating and expanding international markets for regional businesses in Georgia, Alabama, Tennessee and Kentucky. Located on 42 acres, the new Regional Port will also offer easy access to Interstate 75 and U.S. 411.
- **The Charlotte Inland Terminal (CIT):** This 16-acre location is situated at the heart of the Southeast U.S. manufacturing and distribution corridor, serving both the Interstate-85 and Interstate-77 highways. Real-time data management is provided through the Port of Wilmington's Terminal Operating System. Customs-bonded and C-TPAT certified, CIT provides professional, neutral container-yard operations to container carriers, and serves as a staging area for their empty and loaded containers. Grounding and mounting service is available for loaded and empty containers.
- **The International Port of Memphis:** The fifth-largest inland port in the United States, it covers the Tennessee and Arkansas sides of the Mississippi River from river Mile 725 to Mile 740. Ice-free year round, the International Port of Memphis is 400 river miles from St. Louis and 600 river miles from New Orleans. The International Port of Memphis has announced that it is planning to invest in a \$50 million project to develop an intermodal river port facility. The project will have four phases, and will be the only port in the area for 100 miles to be fully intermodal. The proposed plan would allow the port to encompass 53 acres of flat land with two miles of rail and 2,200 feet of Mississippi River frontage. The port's proximity to both I-40 and I-55, the Mississippi River, and to major railways makes it a unique location that could enhance the flow of goods in and out of the Southeast region of the country, planners announced.

How do Canada's major inland ports pursue similar goals? Across the vast expanses of Western Canada, a string of inland ports has been created in recent years in order to prepare goods for

export markets to enhance efficiency at the marine terminals including for instance, speeding up the movement of containers from the seaports, airports and roads of the Pacific and the central plains, into their orbits of influence, where these inland ports act as distribution hubs. But, like their counterparts in the U.S., inland ports increasingly seek to pursue other key economic goals, such as increasing fluidity along crucial rail corridors, enhancing trade gateway efficiencies, real estate development, job growth, and even educational training for corporate workers.

CentrePort Canada

In Winnipeg, Manitoba, this is North America's largest inland port, offering 20,000 acres of high-quality, affordable industrial land, easily accessible to tri-modal transportation, including three Class I railways through inter-switching (Canadian Pacific, CN and BNSF Railway), a 24/7 global air cargo airport, and an international trucking hub.

Among all the inland ports of North America, none is pursuing a more comprehensive and ambitious set of economic goals than CentrePort, in Manitoba. Aside from providing on-site rail access to CP, CN and BNSF, CentrePort also offers highway connections to all major networks including Trans-Canada; as well as to Minneapolis/St. Paul, Chicago and points south and west, including Mexico. Also on site providing air cargo access is the 24/7 Winnipeg James Armstrong Richardson International Airport. With its designated Foreign Trade Zone, CentrePort also offers Greenfield investment opportunities for a wide variety of business operations including distribution, warehousing and manufacturing.

"Three aspects about CentrePort are unique," said Diane Gray, President and CEO of CentrePort. "First, it is the largest inland port in North America, the size of Manhattan, at 20,000 acres. Second, we have some unique tri-modal assets on site, to help companies manage their supply chain." That includes a rail park that will connect rail businesses to three Class-1 railways from a single location; the busiest cargo airport in Canada; and a major trucking hub connected to trade corridors that run in all four directions.

Added Gray, "The third thing that is unique about our project is that we are building it as a live, work, play and learn development. It is a complete community. So it includes a 600-acre residential community that will have both single and multi-family dwellings; green spaces that we are going to continue to protect; as well as recreational facilities, walking trails, biking paths and lots of trees. We are working towards being a greener inland port."

Not only is CentrePort "designed for the trade-oriented business that needs support through transportation and in managing its supply chain, but it is about providing on-campus opportunities for all of our post-secondary institutions to offer courses and training opportunities either for all of the employees of companies that locate there; or to facilitate very specific training programs designed to meet companies' special needs." Gray added, "That's

how we are bringing the four components together; that's the overall approach." Major tenants include Boeing, Bristol Aerospace, GE Aviation, Paterson Global Foods, Bison Transport, FedEx Freight, Canada Cartage, Fort Garry Fire Trucks, TransX, Winpak, MacDon, SMS Equipment, and Standard Aero.

Global Transportation Hub Authority

Based in Regina, Global Transportation Hub (GTH) Authority is Canada's only autonomous and self-governing inland port authority, responsible for marketing, financing, planning and attracting investments for an inter-modal transfer and logistics facility in Regina. The GTH is based in Regina, however it's not just about becoming a major centre for inland logistics. With over 1,800 acres of service-land ready for further development, GTH is pursuing the broader goal of becoming an engine of economic development in the region.

According to Bryan Richards, GTH President and Chief Executive Officer, "Our FTZ and ability to provide access to key transportation infrastructure makes the GTH a logical home for companies participating in import and export activity." He added that nine clients that are active in transportation, warehousing and distribution and related supply-chain activities now operate out of the GTH. Those activities have attracted \$485 million in private investment to GTH and employ more than 750 people. The GTH is building a community where companies can take advantages of sharing transportation assets to optimize their supply chain.

A central message of its marketing campaign is as a self-governing authority, the GTH oversees all stages of development and regulation. That means that clients have a true single point of contact to work with from concept through to operations. In addition, the central location of the GTH allows its customers to "reach sixty million consumers within a day's drive of the GTH and over 270 million within two days." That's because the GTH offers direct connections to CP Rail and to major road networks to cover North America.

Rhonda Ekstrom, Vice President, Business Development of GTH, said, "We are trying to recruit those companies who align with our permitted uses –transportation or logistics, warehousing or distribution, and light manufacturing/processing and companies that are heavily involved in exporting or importing." Ekstrom added, "Clients can either buy or lease land from us for their own facilities or work with our onsite partner to lease space in LEED certified buildings. The ability to own land is of interest for foreign investors as land is an asset that appreciates over time."

The GTH team is structured to deliver the highest possible level of service to its clients. "Our model is to be nimble and streamlined so that we can anticipate client needs and be responsive to new requirements. We strive to provide valuable support in areas such as workforce solutions, access to government programs and connections to industry," comments Ekstrom. "Location + services + team = great opportunity!"

Port Alberta

Port Alberta is a logistics hub and economic development platform based in the Edmonton Metro Region in Alberta, Canada. Port Alberta provides transportation, logistics and supply chain solutions to connect Alberta's economy to worldwide markets, via access to both CN and CP rail lines; Highway 16 and Highway 2 (CANAMEX Trade Corridor); it's a designated foreign trade zone, and Edmonton International Airport. The City of Edmonton, which has a well-developed intermodal and freight distribution sector, is also Northern Alberta's dominant commercial centre and a key connection to Northern Canada.

Daylin Breen, Project Manager, Port Alberta, said, "Port Alberta has been about international trade since it started (in 2006). In fact, our job is to build a culture of trade in the region. The most recent incarnation of Port Alberta, which began in the winter of 2014, is a joint venture between Edmonton Economic Development Corporation and Edmonton International Airport. It is centered around the Cargo Village area at the airport and supports our dedicated air cargo routes to Asia, Europe and North America. This change in focus and structure gives us much more effective decision-making abilities. Now Port Alberta can focus more on what it should be doing, which is facilitating international trade with our regional partners to help local businesses grow beyond the region."

Calgary Region Inland Port

The Calgary Region's role as a significant Distribution Centre for Western Canada has evolved steadily over the past 20 years. The Region is located at the axis of the TransCanada Highway and the CanaMex Corridor (south to Mexico) and centrally situated within the western provinces. Bob Miller, Regional Economic Prosperity Lead for the Calgary Regional Partnership explained how this positions the Region with a very competitive Total Landed Cost advantage for imported goods and materials bound for Western Canadian communities. Container traffic from both Port of Vancouver (by CP) and the Port of Prince Rupert (by CN) converges at two large intermodal facilities in the Calgary Region, is transferred to many Distribution Centres and trucked to western Canadian markets. The Calgary International Airport (YYC), boasting the longest runway in Canada and providing weekly cargo flights to Asia and Europe, is a major air freight complex. In 2015, the Calgary Region became a foreign trade zone.

Coordination, planning and marketing of the Region's inland port function, facilities and transportation networks remains a collaborative effort among the Region, Calgary Economic Development, multiple municipalities, the airport, educational institutions, facility operators, industry leaders and networks. Unlike many other inland ports, the Calgary Region Inland Port is a voluntary collaboration across municipalities and partners, neither associated with designated land holdings nor a formal or distinct operating/governance body.

Ashcroft Terminal

Situated at the critical start of CN/CP co-production through Canada's irreplaceable Trade Corridor, it is 340 kilometres east of Vancouver, and 90 kilometres west of Kamloops, BC. Ashcroft Terminal has 320 acres of Industrial land, with an additional 350 acres of agricultural buffer land. As both the CP and CN mainlines are on the Ashcroft Terminal site, every piece of cargo that passes through any of the Vancouver marine terminals has to pass through the Ashcroft Terminal in order to get into or out of North America. Ashcroft Terminal will continue to be an important link in Canadian transportation supply chains. Geographically, this is the closest, large-materials trans-loading terminal outside the congested Lower Mainland, its terminal operates on a 24/7/365 basis, with 6/day per week rail service. Ashcroft Terminal today serves customers in all sectors of Canada's Natural Resource Industries from forestry, mining, agriculture and oil & gas. Currently Ashcroft Terminal has 32,000 ft. of rail servicing 18 users. Full Build out plans will see over 25 miles of internal track including a twinned 25,000ft loop track directly off CP's mainline with a CN inter-switch.

Explained Kleo Landucci, Vice President, Corporate Development, at Ashcroft Terminal, "It's a complicated logistics system here in BC that few people really understand: at the head of CP / CN co-production where everything going westbound through the Fraser canyon goes on the CN mainline, and all product coming out of the Vancouver Marine Ports travels on the CP mainline. Effectively a rail pipeline through some of Canada's most intense geographic terrain. Co-production through this zone is the key to enhancing capacity through this critical gateway to overseas markets. It's quite unique that we can service customers on both CN and CP, and we can handle east-bound and west-bound products."

Perspectives on the Performance of Canada's Inland Ports

"You have to look from two perspectives; one is from the main ports – that is the seaports – and one is from the inland ports," stresses Arënso Bakker, Partner at StigConsult, a consultancy based in the Netherlands. The main seaports have discovered that they can only function when they have strong connections with 'inland ports' located in their hinterland. Previously, "a lot of governments and port authorities were investing in seaports, and new infrastructure in the seaports, but afterwards they were disappointed that there was no big growth; no more tonnage [at their seaport]. That was because their hinterland connections were not developed at the same level."

As a result of some early failures, regional planners have "learned that you cannot focus only on highways; only on rail, or only on barges; the combination is very important. If you want to switch from rail to barge, or from road to rail or whatever; you need these inland ports. From the perspective of the seaport, they just need the head-spoke system. A place in the hinterlands where they create flexibility by having intermodal and multimodal ports. That's the

only reason, from the seaport's perspective, for having the inland port," whether the seaport in question is in North America, Europe, or Latin America.

However, if you look at things from the viewpoint of the inland ports, added Bakker, "it is a completely different agenda." Local governments and cities not near the sea want to attract new jobs, companies and investments from companies that want to be located near one or more seaports. Nowadays, "The governments of these inland ports are much more focused on creating the right investment climate for these companies." Ultimately, the governments of these inland ports "compete with seaports." Their big problem is that the cargo that seaports handle winds up "going into the hinterland, and the jobs are no longer created in the seaports" themselves; instead, "the jobs are created in the hinterland."

Why Some Companies Prefer not to Settle near a Seaport

"Although seaports and inland ports advertise that their relationship is collaborative, this is not always the case," said Bakker. From one perspective, seaports and inland ports are competitors, but from another perspective, they need each other, he continued. "The land in inland ports is often cheaper, and there are fewer traffic jams and [other] problems," because of the lower level of congestion. Thus, for some companies, "it is very attractive not to settle near a seaport, but to settle near an inland port; especially, if that inland port has strong transportation connections to several seaports," affording companies the opportunity to choose among them. "The seaports need inland ports, otherwise they don't function and may inevitably find their growth constrained by land supply and/or congestion."

Traditionally, in both Europe and North America, Bakker added, the big seaports have been based in heavily populated areas with a great deal of traffic. "That's important because these people needed to work in the ports. But cities have expanded, and land has become scarce – and more expensive; and if you look now, 50 years later, almost all the value added has left the cities and gone out to the hinterland."

Bob Miller, Regional Economic Prosperity Lead for the Calgary Regional Partnership and a former Urban Planner in Calgary explains how large metropolitan areas can change as they grow and mature over time. "Older warehousing and manufacturing areas, once on the edge of downtown and now finding themselves in the inner city of a growing MetroRegion, wrestle with worsening congestion and can find it hard to compete with higher land value urban uses like commercial and residential development. Needing room to expand and to operate more efficiently they often choose to relocate to suburban locations with less congested roads, lower land prices and larger parcels to accommodate their expansion needs. New warehouses, in particular, prefer more accessible suburban locations. In MetroRegions like Calgary, that growth has ample room to expand at the urban edges; in older cities, like MetroVancouver, the

limitations of increasing congestion, higher land prices and land supply constraints pose an ongoing challenge for expanding and new warehousing and logistics operations.”

Kleo Landucci, Vice President, Corporate Development, at Ashcroft Terminal, agreed.

“Vancouver is a beautiful city but we don’t have an abundance of land. We use the inland ports to increase through-put as much as possible... In the last few years, with the increased congestion, we’re seeing a terrific opportunity for inland ports at strategic locations throughout the [Asia-Pacific] Gateway to play a very valuable role in providing cost-effective opportunities that are efficient and sustainable to put products directly onto rail and hit the marine terminals hot, so you’re not having to trans-load the cargo with the significant traffic.” In more congested areas, “The truck-in, truck-out properties are very expensive and inefficient.”

The Challenge of Job Generation

As container ships in Europe get larger and larger, it has become easier to move more containers to Rotterdam, Europe’s largest port measured container volume. And from ports like Rotterdam, these containers have to be distributed to several places, which requires an efficient transportation network to and from those inland ports. Notes Bakker, “That’s the dilemma: To function as a container port, these inland ports are very important for transshipping goods. But if you are talking about their impact on the European economy, it is more important to have [a growing volume of new] companies in those ports. So you’re talking about another sort of goal.” In Canada, as well, when an inbound shipment is loaded onto a truck at a Pacific seaport, but that truck doesn’t stop until it reaches its final destination somewhere in Canada’s vast interior, that seaport doesn’t reap much in the way of economic benefits, he explains. “The better the inland connections, the easier it is to have containers going to the hinterland; and if you create very good inland connections, it is very attractive to put the containers straight from the ship onto the trains and trucks to the inland ports.”

On the other hand, inland ports that are closer to that final destination, are increasingly unsatisfied with acting as mere hubs for transportation and logistics. “What the inland ports really want to achieve is to create jobs by developing the inland ports,” said Bakker. Such a trend is not a positive for seaports, which are obviously anxious to generate new jobs, rather than lose them to inland ports. A recent report by the Organization for Economic Cooperation and Development (OECD) noted that while Amsterdam and Rotterdam – two of Europe’s three largest ports in terms of container tonnage – play a very important role when it comes to logistics, those two cities do not derive much economic benefit from that role. When seaports fail to generate new jobs, noted Bakker, they face a rising chorus of criticism from politicians and the public. In such a case, “you have the downside of a port – traffic, congestion, high prices; and environmental problems – but there should be a balance; an upside of generating jobs.”



On the other hand, several inland ports in Europe are expanding their operational breadth in an effort to generate a growing volume of value-added, knowledge-intensive jobs. Bakker notes, “In the past, they might have had only the terminal, with access from there to rail and/or road or from road to barge. Now, instead of acting largely as a transfer point, their function is changing. There is a lot more economic activity at these locations.” However, “Nowadays, the bigger inland ports - such as Duisburg in Germany - are having the same problem as the seaports had fifty years ago. These inland ports have become bigger; land has become scarce; environmental problems become bigger, and there are a lot of complaints from people living there. And so you have the same cycle, as companies move out [of that big inland port] and go to the smaller inland port,” which, in turn, faces new challenges. “This [cyclical] process is happening all the time.”

“European governments are also taking a more strategic view of managing the risks involved in these processes. Until recently, European governments often built the infrastructure for inland ports first, and then waited for the business activity to happen,” said Bakker. “Now people have realized that “if you build the infrastructure in the wrong place, nothing is going to happen. It is an interactive process from both a technical side and an economical side. If you want to create an economy, you need to create cost-effective and efficient logistics. If you have that, you need to build good infrastructure. If you build it bottom-up, then you take a big risk,” he added.

Leveraging the Full Economic Impact of Inland Ports

Inland ports are believed to be important facilities and gateways for strengthening export trade corridors and supporting the continued diversification of the provincial economy. As one example of this, Miller refers to a supply chain workshop sponsored by the Calgary Regional Partnership and Calgary Economic Development earlier in 2016 that engaged southern Alberta agricultural producers, transportation and logistics operators, the Port of Prince Rupert and ocean container companies in a very focused conversation. What would it take to realize a greater diversity of value-added agricultural products from across Southern Alberta being shipped in containers from intermodal facilities in the Calgary Region, through the Port of Prince Rupert, to foreign markets? The presence of two intermodal facilities in the Calgary Region Inland Port, initially developed to support the importing of products into Western Canada, is increasingly viewed as a tremendous asset that has yet to be fully leveraged on the export side, taking advantage of returning containers and competitive backhaul rates.

On the other hand, Bakker advised that if inland ports want to become job-generating hubs of economic growth, they need to target the right kinds of companies to invest in their inland port. “You have to study what typical industries are happening in your neighborhood [beyond transportation/logistics/distribution firms. You have to see what firms exist. You need to see how you can make it easier for stakeholders at your port to strengthen one another with

education, training; so you can create an economic cluster,” said Bakker. “It is like an economic flywheel that turns faster, faster and faster.

Although managers of inland ports continue to stress the efficiency and convenience of their transportation and logistics connections, Bakker said that the central goal should never be to create the biggest inland or seaport in your region or nation. He adds, “If you say, ‘I want to become a transport hub,’ I personally say, Why would you want to have that? You’d only have a lot of traffic and a lot environmental problems. But it doesn’t bring much, if any, profit because there aren’t a lot of people working there. What you want, as an inland port, is to have many different kinds of companies, with their modalities and their abilities; the inland port is only really an enabler to attract companies.”

Rotterdam provides an innovative model for the strategic restructuring of seaports into more attractive locations for job-generating corporate investments. Last November, the Port of Rotterdam Authority and the municipality of Rotterdam announced their collaboration to construct “remarkable, innovative places to live and work in Stadshavens Rotterdam.” These places, noted the Authority, “Are intended to further strengthen the economic backbone of the city and its port. The only way for Rotterdam to grow is by broadening its economic profile and taking advantage of its unique characteristics.”

According to a government draft, “*Rotterdam Urban Vision Spatial Development Strategy 2030*,” there will be a gradual transformation of the various port areas into urban areas; including “an attractive and fully-fledged city centre...The development of Maasvlakte 2 will offer space to new port activities and bring about the relocation of companies.” As part of the plan, “container trans-shipment will disappear from the Stadshavens, [and] new business locations will become available to companies active in port-related growth sectors.” The plan’s far-reaching goals include “the development of new forms of knowledge intensive activity in the creative and services sectors, and the creation of unique living/working environments by the water’s edge.”

No one can say whether such an ambitious plan will have a major impact on the way inland ports in North America expand their functionality and role in the future. The challenges faced by Canada’s seaports and inland ports are significantly different, if for no other reasons than the population density of the Netherlands – 406 per square kilometre -- is about 130 times higher than those in the provinces Canada (3.64 per square kilometre). [Or 85 times higher than, say, that of British Columbia, which is 4.76 per square kilometre].

In Canada, the U.S. and elsewhere around the world, each inland port must address its own unique characteristics, depending on the peculiarities of its geographical locations, the transportation patterns and infrastructures in its region, the nature of the cargos it handles, and the economic strengths and weaknesses of its surrounding communities. Because each is unique, there is no ‘one-size-fits-all’ series of prescriptions to follow. The only certainty is that



inland port managers have to tailor their offerings to the changing needs of the shippers, logistics providers and other businesses that make up their ever-expanding community of stakeholders.