

y definition, a port can be one of two things. It can be a town or city with a harbor where ships can load or unload, especially one where customs officers are stationed.

Or it can be an inland town or city whose connection to the coast by a river or other body of water enables it to act as a port.

So what do you call a port that is both those things?

Busy, judging by the amount of cargo being handled by the Port of Montreal—a flow, experts say, that will continue to grow into the foreseeable future.

"We are doing very well," says Sophie Roux, the Montreal Port Authority's (MPA) vice president public affairs. "But we have to keep looking ahead and working hard to ensure that that success continues."

According to preliminary statistics, Roux's facility handled close to 38 million tonnes of freight in 2017. That unaudited number represents a seven per cent increase in cargo traffic, a record performance in the 188-year history of Canada's second-largest port.

About a quarter of that total cargo came from Middle Eastern and Asian countries and transited through the Suez rather than the Panama Canal.

That is a sea change from the port's traditional markets in Europe and the Mediterranean, where it has long been a preferred port of entry into the heartland of North America.

According to Roux, last year's record cargo results are a reward for the years of effort that have been made to diversify the port's overseas markets and maintain its positioning as the leading port in Eastern Canada for containers.

"Containers are a key driver for us," Roux says about the business, which was introduced in 1967 and led to the construction the following year of Canada's first container terminal. "We offer an efficient intermodal chain with CN and CP right in our yard, and we are only two train days from the American Midwest."

The port, she adds, has recently completed-and is undertaking-several major infrastructure projects that aim to aid and abet that container growth.

One is the \$197-million makeover of the 50-year-old Viau container terminal. Inaugurated in 2016 and in operation for the past year, the face-lifted facility willonce it reaches maximum capacity, which is expected to occur within the next few years-add more than 600,000 twentyfoot equivalent units (TEUs) to the port's total capacity, which will increase to 1.5 million TEUs overall.

Once fully operational, the new Viau terminal is also expected to generate some \$340 million in annual economic benefits for the surrounding area, as well as 2,500 direct and indirect jobs.

Location, location, location

Those numbers will climb much higher however, if and when the new container terminal that the port is planning to build 40 kilometres downriver from Montreal comes on line.

Now in advanced stages of public consultation, the \$650-million project features several major components, including the construction of two berths and a container handling area, an intermodal rail yard connected to the main network and a truck entry portal connected to the regional road network.

Expected to be operational by the mid-2020s on a mostly uninhabited tract of riverside on the south shore of the St. Lawrence River in the town of Contrecoeur, the terminal is expected to be able to handle 1.14 million TEUs per year.

"This additional port space will make it possible to support the growth of this business segment and make the most of



Photo: LeContrecour

the economic and commercial opportunities arising from emerging markets, the Canada-European Union Comprehensive Economic and Trade Agreement and the Quebec Maritime Strategy," the MPA's vice president, operations, Daniel Dagenais, stated at a news briefing about the project last month.

The MPA also released the findings of a federal environment impact assessment of the project, which will be the subject of upcoming public hearings.

According to Roux, the project has been on the books since the late 1980s, when the MPA acquired the land in Contrecoeur.

"It's the perfect place for container handling because of its great location near rail and road networks and the markets we serve, and because it's outside of and away from dense urban areas," she says.

The terminal, she adds, will also feature the same rail-to-dock service and intermodal chain—the so-called "Montreal Model"—that has made the MPA world famous in logistic and transportation circles.

"We want to avoid having to say one day, 'Sorry, no vacancy,' which would be the worst possible thing," says Roux. "With the Contrecoeur project we are confident that we can sustain and secure the future of container traffic not just in Montreal but in Eastern Canada for the next 50 years. Thinking ahead like this is the only way we can compete with giants like the Port of New York City."

Saturation point

Claude Comtois agrees. A geography professor at the Université de Montréal and a leading academic expert on the international maritime industry—from the organization of markets and the structure of trade networks to the flow of merchandise and the capacity and competitiveness of ports—he says the Port of Montreal is at the heart of vibrant and in some ways new network dynamics on both the high seas and in northeastern North America.

"The port is very healthy," Comtois says. "But it can't afford to sit on its laurels."

According to Comtois, the Port of Montreal is the envy of major ports around the world because of its unique rail-at-dockside infrastructure.

"Forty-five per cent of containers that come into Montreal go right from ships to railway cars that are bound for the American Midwest," says Comtois, who spent a decade as director of transportation projects for the Canadian International Development Agency. "That's unheard of in ports like Antwerp and Shanghai and Hong Kong and Singapore, which don't have that ability. Delegations from around the world come to see the Montreal Model in action, and dream about it."

Comtois credits both the prescience of Canada's early railroad barons and the organizational prowess of the port's modern administrators for keeping things humming dockside in what is by world standards a physically small port that is hemmed in tightly on all sides.

"In other ports, you will see a lot of containers stacked up at terminals," says Comtois. "You don't see them at Montreal because they don't have the space. They are condemned to be efficient, and they have succeeded because they lead North America in terms of time that containers sit on the dock."

Though he is a fan of the Viau terminal, Comtois says the site is quickly reaching the point of container saturation.

He calls the proposed Contrecoeur project "a fabulous idea on a superb site." Comtois also lauds the port's efforts to become smart, including the monitoring of truck traffic through meta data analysis and a plan to integrate imbedded intelligence in port activities and services.

The advent of new traffic is also giving the port's bottom line an unexpected bump, says Comtois. A major one is containerized grain—notably pulses such as lentils, chickpeas and other high-protein dried seeds—which can be itemized for volume, not bulk.

"There is high global demand for it," says Comtois. "It's nice for the port of Montreal because, in terms of traffic, it containerized grains have taken up much of the capacity slack that has been created by the decline of grain traffic on the St. Lawrence."

He said the \$8 million the port spent recently to transform an old terminal to handle those specialized grains and fill containers is both seed money to help shore up that new business and fodder for its efforts to diversify traffic into Egypt, the Middle East and Asia, where pulses are most in demand.

The Montreal Model

According to Comtois, the port's development plans and efforts, together with the Quebec government's maritime strategy—a major component of which is the creation a massive logistics hub that revolves around the Port of Montreal—will help to ensure the facility's pre-eminence in the economic, social and even environmental lives of the more than four million people who live in the greater Montreal region, including the nearly 20,000 who are employed directly or indirectly by the port's activities, which generate \$1.5 billion in annual economic activity.

"We did a calculation as to what point the citizens here rely on the port and we found between four and five tonnes per capita per year of traffic—everything from cement and clothes to food and forest products for homeowners, hospitals and businesses," says Comtois.

"If the port wasn't there, all of that stuff would have to come in by road or rail or air."

Comtois also believes that the port's development plans will help to counter what he calls "the manageable challenges" facing the facility as well as potential Canadian or American rivals.

The biggest challenge—the scrape-

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bottom, 11.3-metre depth of the water column in the St. Lawrence, which could and can lead to declines in the size of international ships and payloads going to and from Montreal, which is 1,600 kilometres inland from the Atlantic Oceanis being met with frequent dredging at strategic chokepoints (something that major ports from New York and Norfolk to Antwerp and Shanghai must do, says Comtois) and plans to digitize the depths of the river through the use of on-board monitoring under vessel keels.

"You never get 10,000 TEU ships into Montreal, they never go past Quebec City or Trois-Rivières because of the water column," says Comtois. "But that's actually a good thing because the turnaround at Montreal with 5,000 or 8,000 TEU ships is

very fast, which only helps to enhance the port's reputation for speedy service."

For Mathieu Charbonneau, that speed and fluidity, plus the Port of Montreal's prime location as the most westerly, year-round international port in eastern North America (only lakers can go further west beyond the Lachine Rapids), help to make and maintain the facility's role as the beating heart of a massive regional logistical cluster.

"One ship brings in 4,000 containers, which are then loaded onto hundreds of trucks and dozens of trains," says Charbonneau, executive director of Cargo Montréal (CargoM), a government-backed agency that brings together and works with logistics and transportation stakeholders in the Montreal metropolitan cluster in an effort to identify and resolve cluster-clogging problems. "There is a whole ecosystem of 6,000 companies with 120,000 employees that rely on the movement of goods into and out of the port of Montreal."

According to Charbonneau, the efficiencies of the Montreal Model-and the absence of need for the use of shuntersmeans the "dwell time" of merchandise on docks is only 1.8 days.

"That is half the dwell time at East Coast ports (and) gains back the extra sailing time to come up river," adds Charbonneau. "But we're that much closer to the 110 million consumers in the North American heartland, which gives us a considerable competitive advantage that is understood and accepted by the industry."

Setting the Stage

The West Side Modernization project is all about ensuring the Port of Saint John's future

BY TOM PETERS

he Port of Saint John, New Brunswick is undertaking a major terminal project not only to build on a "niche" container market, but to ensure the port will progress under future generations, according to Saint John Port Authority president and CEO Jim Quinn.

Saint John announced in 2015, the \$205-million West Side Modernization project to accommodate larger vessels and to enhance the port's container terminal capabilities. In addition to the expansion and redevelopment of the piers, the 60-acre project, to be completed in three phases, will see 25 acres transformed into container storage, 10 acres set aside for multipurpose use with the rest of the land destined for supporting infrastructure such as warehousing, stevedoring and transloading operations.

There are proposals to build large container terminals in Montreal, Quebec City, Melford, Sydney and possibly Halifax, but Quinn is not overly concerned. He



said ports like Halifax, and some of the others as well, are focused on being able to handle the very largest container ships, but "Our market is a niche market. When selling our advantage we underscore our geographic position, our close proximity to the (U.S.) Northeast and our close connectivity by road and rail to the central part of Canada. To be ready for growing business, we need to design the terminals for a hundred years and design them in a way that the largest ships that we can handle come into the inner harbor," he said. The very large ships he talks about "are in that 14,000 TEU range. The plan is to have the capacity to be able to service ships this size so that we don't sacrifice the growth ability of future generations. We want to take advantage of maximizing what we have and what future generations will have to work with," he said.

Saint John has had container ships ranging in size from 1,200 TEUs to 5,000 TEUs and Quinn expects the container fleet servicing Saint John "will likely grow from 5,000 to 7,000 TEUs."

Quinn said there is a lot preliminary work being done which will take the project to the point where it is ready to go out to tender. "After this, we can get on with the actual construction." There is also a demolition phase in the preliminary work which Quinn says will likely start early in the third quarter pending environmental approval. It involves taking down about 50 metres of the old pier wall face and eventually reconstructing and extending out about 350 metres. There is also infrastructure that has to be moved inland such as piping and electrical services so