

The **LINKS** that **BIND**

A former Dartmouth coast guard site is set to become a centre for ocean-related industry in Nova Scotia

BY AMANDA LESLIE

From pirates and schooners to fishing and transatlantic trade, Nova Scotia has carved an existence out of its connection to the sea. But like the tides that ebb and flow, the once successful blue economy receded into distant memory, the result of overfishing and alternative methods for travel and trade.

In the past few years, however, ocean technology and other ocean-related industries have started to revive the blue economy once again. The most recent development is the announcement of the ocean innovation centre, a project that has the potential to propel the province, and the rest of the region, onto a global stage.

Since 2011 the cluster of buildings at 27 Parker St. in Dartmouth has stood empty. It's prime real estate: a 8-acre site on the waterfront with more than 850 metres of wharf and two 100-metre piers. The area was once home to the Coast Guard, but when the base relocated to the Bedford Institute of Oceanography, the site remained vacant. That is, however, until the Waterfront Development Corporation decided to purchase the property from the federal government. A Crown corporation, Waterfront Development identifies lands around Halifax harbour that could contribute to the economic-growth goals of Nova Scotia, and

the former Coast Guard base has been on its radar for a while.

"We knew the property had economic potential for the province's ocean sector," says Colin MacLean, who has been the president and CEO of Waterfront Development since 2008. "We did a market study on potential uses for the site, and the results were overwhelming. There are so many sectors that could benefit from this project—supply chains to NSPS, offshore-oil exploration, marine and port-related services, tidal energy, scientific research, and the ocean technology industry as a whole."

Waterfront Development wasn't alone in advocating for the creation of the ocean innovation centre. Industry leaders from Dalhousie University, Innovacorp, the Nova Scotia Community College, and the Institute for Ocean Research Enterprise (IORE) were also instrumental in pursuing the idea. "There's great interest in the province in growing our ocean-innovation ecosystem," says MacLean. "We have to harness our natural advantages with the ability to create knowledge through our universities, community colleges, and government labs. Additionally, we need to help get new businesses in the sector off the ground."

The site itself is in good condition, and

MacLean believes that most of the buildings can be repurposed for future use. "The federal government operates to high standards, and they took good care of the property," he says. "We will make some targeted investments in the infrastructure to prepare it for new businesses." MacLean expects the site to be ready for tenants within the next 18 months. While it will take some more organizing to determine the right mix of businesses and organizations for the property, the project is already attracting international interest. "When you receive calls from outside Canada within 30 days of making an announcement," says MacLean, "you know you're on the right track."

Jim Hanlon first heard about the possibility of a centre for ocean innovation in 2012, when he became the CEO of IORE. "The idea has been buzzing for a number of years," he says. While he has no formal involvement in the project, he has been a dedicated supporter from the beginning. "We need synergy," says Hanlon. "The sector grows when people intersect."

IORE is one of many potential tenants looking at the new site. "There's a lot of demand for the space, and the curiosity factor is very high," says Hanlon. "One of the problems with the ocean technology sector in Halifax is that it's a diffused



Colin MacLean, Waterfront Development

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community with no common gathering place. Not everyone will be able to uproot and move to the new facility, but it gives interested parties a tentacle here. It gives them a presence."

Ocean technology start-ups are crucial to the growth of the sector, and most need machines and equipment to get started. This expense is one of the biggest barriers to new companies and an area in which the ocean innovation centre could prove useful. "The site would allow for shared tools," says Hanlon. "This would eliminate the expense barrier and help early stage companies get their products into the water faster and more cost effectively."

It should come as no surprise that the prov-

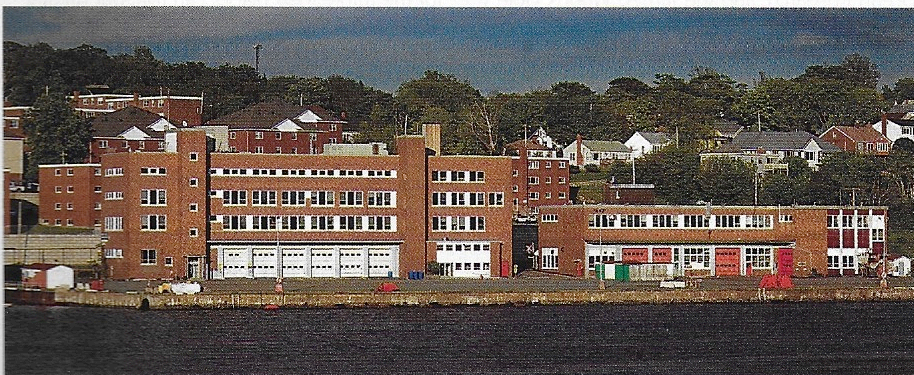
ince has designated Innovacorp as the lead on the business incubation side of the project. As Nova Scotia's early stage venture capital organization, Innovacorp finds, funds, and fosters innovative start-ups that strive to change the world. Between 2010 and 2015, it made \$24 million in investments in 36 technology companies, which leveraged another \$34.7 million from other VCs. "We envision this region becoming one of the top 10 start-up ecosystems in the world," says Stephen Duff, the president of Innovacorp. "The ocean innovation centre is an opportunity to add ocean technology to our other growing sectors, like ICT, clean technology, and life sciences, and has the

potential to integrate some of those sectors."

The site will include versatile start-up space for early stage ocean technology companies, along with business acceleration programming to help start-ups speed successfully to market. While the specifics might differ from some of the other sectors in Innovacorp's portfolio, many of the best practices in incubation and acceleration can be adopted for ocean technology.

"Once companies 'graduate' from an accelerator, they need a place to set up shop, build prototypes, and go to market," says Duff. "This is where incubators play a critical role. They provide not only shared infrastructure, assets, and services for start-ups but also a community of like-minded entrepreneurs." The new site will combine all of these different components in one convenient location. "The foundation of an ecosystem is diversity," says Duff, noting that the stakeholders for the project envision a combination of large multinationals and smaller SMEs that will be able to collide with start-ups.

The estimated value of the global market for ocean-related industries is more than \$3 trillion (U.S.) annually. "That figure has doubled in the last six years," says Duff. "In Nova Scotia alone, the sector employs around 30,000 people and produces \$1.6 billion in income, which equals





Jim Hanlon, IORE



Stephen Hartlen, Dalhousie University

roughly 15.5% of the provincial GDP."

There are more than 200 ocean technology companies in the province and 450 people with oceans-related PhDs, the highest concentration per capita in the world. Duff believes this critical-mass baseline can be leveraged to advance the sector and expand the economy. "The growth potential for the ocean technology industry in the province is huge," he says, "so long as we're strategic about how and where we play." He stresses the fact that our future success will depend on our ability to leverage both our natural assets and research-based universities and community colleges, while steadfastly collaborating with the rest of the region and beyond.

If the new advanced diploma in oceans technology is any indication, the Nova Scotia Community College is already on board. NSCC worked closely with industry leaders to create a program that meets the sector's current and future needs by focusing on knowledge-based skills that can be used to create and apply technology solutions that are unique to ocean environments. It has been well received by the industry and students, all of whom are currently working in the ocean technology sector on paid internships. "Graduates are leaving with the skills they need to excel," says NSCC president Don Bureaux. As for the ocean innovation centre, he's a firm supporter: "It will be an asset for our entire province. The ocean technology sector in Nova Scotia is booming. With a dedicated place for researchers and students at post-secondary institutions to continue their collaboration with industry to test and invent new technologies, it's

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— Stephen Hartlen, assistant vice-president of industry relations, Dalhousie University

only going to grow."

One of the biggest players in the region's oceans sector is Dalhousie University, which has a global reputation for ocean-based research. The school is home to a number of leading initiatives, such as the Marine Environmental Observation Prediction and Response Network, the Ocean Tracking Network, and the Canada Excellence Research Chair in Ocean Science and Technology. This expertise has allowed Dalhousie to partner with international institutions, including Germany's GEOMAR Helmholtz Centre for Ocean Research, and the famed Woods Hole Oceanographic Institution in the Massachusetts.

Three of the driving forces behind the development of the Ocean Technology Centre were Dalhousie president Richard Florzone, vice-president Martha Crago, and assistant vice-president of industry relations Stephen Hartlen. "It's a potential game-changer," says Hartlen. "We're already great at the science. If we create a cluster of local companies with a little support, it could grow exponentially."

Hartlen believes that ocean research and innovation will be an important asset in the

future. "It's exactly the kind of sector you need to grow here," he says. "The goal is to form new companies that will have access to the facility and the developing ecosystem." Dalhousie is already taking steps to do this, with elective courses focused on innovation, creative thinking, and entrepreneurship. "If we want to take the industry to the next level," says Hartlen, "we need businesses and ideas to collide."

Atlantic Canadians are surrounded by ocean. It's the foothold that allowed the region to establish itself as a centre of activity hundreds of years ago, and it could be the stepping-stone for the future. Few places can rival our natural marine resources or our concentration of ocean PhDs and cutting-edge universities and research institutions.

The ocean innovation centre is the link that could bind all of it together, fuelling the growth of a new and improved blue economy that thrives on the basis of innovation and sustainability. "Understanding the ocean and what it offers both environmentally and economically will depend upon the development of ocean technology," says Colin MacLean. "Nova Scotia has the potential to be right in the centre of this exploration." ■