

SEATAC



Nova Scotia is home to over 500 ocean sector companies and has the largest number of ocean tech startups of any province in Canada. Most of these companies do not have in-house research departments but do require help designing, building, deploying, and testing their products to get to the next stage of development. That is where we come in.

Affiliated with Nova Scotia Community College (NSCC), SEATAC is an applied research and development centre that gives small- and medium-sized enterprises (SMEs) access to the College's specialized equipment, facilities, and expertise. We work to fill the gap between proof-of-concept and market to help companies turn ideas into market-ready products. SEATAC also provides technical and business services to help SMEs improve processes and plan for future product

development. Companies working with us retain all their intellectual property.

Located at the Centre for Ocean Ventures and Entrepreneurship (COVE) with harbour-front access and in the Design and Innovation Centre at NSCC Ivany Campus in Dartmouth, Nova Scotia, SEATAC's engineers and ocean technicians are positioned to consider technical requirements while meeting business needs and market realities. Our research and development services include mechanical/electrical design-and-build with an emphasis on prototyping and advanced manufacturing support. We also do product testing, data analytics, and communication, and offer advanced coastal mapping services.

An example of an advanced manufacturing project we have completed was with Biome



SEATAC Project Coordinator, Neil Laamanen, working on a 3D metal printed prototype for use in the tidal sector.

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Renewables. The company wanted to apply the design of its PowerCone wind technology, which catches more air while reducing vibrations and noise, to an underwater turbine for tidal power. Collaborating with Biome Renewables' engineers and product developers, NSCC researchers used the College's Renishaw metal 3D printer to build two underwater turbine prototypes. The prototypes have been deployed in Ireland for ocean testing.

One of the benefits of working with us is that SEATAC is equipped to support blue-tech companies through multiple stages of development – whether that be design, build, product testing, data analysis, or any combination of these steps. For example, our lead engineer designed and 3D printed a low-cost customized mounting shelf to go inside Aquaband-Marecomm's new underwater acoustic communications system. The next step was to deploy and test the system. Our crew provided a small vessel and the hands-on support needed to test the capabilities of the technology.

Over the past few decades, NSCC has made significant investments in research facilities and equipment, such as a wave tank at the Nautical Institute (23 m x 18 m and 4 m deep), a metal 3D printer at Ivany Campus, and a topo-bathymetric lidar scanner used

to map coastal zones. In summer of 2023, SEATAC's newest asset, a nine-metre oceanographic service vessel, will be available to companies that do not have a need to own a vessel and scientific equipment, but do have a need for on-water testing.

In addition to our many research and development services, SEATAC also provides business support. We work with clients to create technical reports and have provided consultation on proposal writing. We are in the process of developing an interactive marine workshop geared towards helping traditional marine industries move towards digitalization and another that will better equip researchers with mariner skills.

SEATAC supports SMEs through applied research and development services, business and technical support, and customized training. If you are a SME in ocean technology looking to scale-up manufacturing or develop a prototype or requiring on-water testing, contact us to start exploring our ocean solutions.

For more information:

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