



**British Columbia,** *Naturally.*



## A World-Class Marine Hub

British Columbia (B.C.) is pioneering ocean technology, from establishing one of the world's first and largest undersea digital observatories to developing deep-water submersibles and remotely operated vehicles. With the world's largest hybrid and fully electric tugboat fleet, B.C. is constantly pushing the boundaries of innovation. With ongoing shipyard expansion, the province continues to move forward on new commercial applications for both established and groundbreaking technologies. B.C. has cultivated a strong foundation in the ocean science and technology industry positioning itself as a leader in various domains such as:

- Defence and security
- Marine transportation, shipbuilding and ship repair
- Environmental monitoring and ocean stewardship



## A Maritime Economy

As a Pacific gateway with more than 25,000 kilometers of coastline B.C. has a rich history in the marine sector with 130 years of shipbuilding, refit, repair, maintenance and supply-chain activities. Today, B.C.'s maritime sector is the largest in Canada, generating approximately \$4.0 billion in total output, and sustaining jobs for over 34,000 people. B.C. hosts Canada's two biggest ports: Vancouver, which trades with over 170 countries, and Prince Rupert, boasting North America's shortest shipping route to Asia. Additionally, Victoria's Esquimalt Graving Dock stands as the Pacific Northwest's largest ship-maintenance facility of its kind.



**British Columbia companies are at the leading edge of research and commercial development of advanced marine technologies.**



## Diverse Marine Sector

The diverse marine sector in British Columbia includes shipbuilding and design, ship repair, marine transportation, aquaculture and fishing, tourism and recreation, government services and defence. B.C. companies are competing on the world stage in robotics and sensors, data analytics and communication technologies to address climate challenges and meet the increased demand being placed on our oceans. B.C. ocean technology companies are well established in global markets, recognized worldwide for their progressive solutions.

## Established Expertise

British Columbia companies are at the forefront of research and commercial development of advanced ocean technologies. They have successfully developed, manufactured and exported products and systems to government and private sector customers worldwide. The sector is seeing continued progress and innovation through grassroots, industry-led initiatives like the Vancouver Maritime Centre for Climate, dedicated to accelerating the transition to a zero-emissions shipping industry in British Columbia, and the Centre for Ocean Applied Sustainable Technologies, furthering creative solutions to industry challenges.

## World-leading Research Network

Universities, research organizations and private companies in British Columbia work closely to share knowledge from the marine technology and science community and to commercialize data and components of its advanced research.

The Bamfield Marine Sciences Centre (BMSC) is a shared campus of the Universities of Victoria, British Columbia, Alberta, Calgary and Simon Fraser University. Located on the outer west coast of Vancouver Island, BMSC provides access to a diversity of marine, terrestrial, freshwater and cultural sites of the North East Pacific basin. With 3,000 square meters of modern laboratory space, it can support research in almost any field of study.

Organizations like the BC Innovation Council (BCIC) drive economic growth by matching innovators with industry challenges in clean tech and natural resources, including the ocean tech sector. BCIC provides business coaching, hiring grants and funding for research and development, pilots and scaling.

## Highly Educated Workforce

British Columbia's advanced education system offers world-renowned programs in ocean sciences and technology. With highly respected programs in oceanography, environmental sciences and marine technology, our post-secondary education system is training the future generation of ocean technology innovators. The educated workforce at British Columbia's ocean technology companies can provide advanced solutions to the challenges of working in the marine environment.

## Industry Profile

The B.C. marine industry is well-diversified and features a range of capabilities and sub-sectors. Industrial marine clusters in B.C., primarily situated in Vancouver and Victoria, host over 1,000 companies, including Seaspan Marine with its multi-billion-dollar ship construction program for the Government of Canada. These clusters include associations, universities, research institutes and a large naval presence. Initiatives like the Vancouver Maritime Centre for Climate and The Centre for Ocean Applied Sustainable Technologies (COAST) Innovation Hub demonstrate British Columbia's commitment to sustainable practices and innovation in the maritime sector.

### Shipbuilding, Refit, Repair and Maintenance

B.C. companies use advanced software, engineering, logistics and techniques to fabricate, repair and refurbish coastal and ocean-going ships. B.C.'s experienced companies have global reputations in naval architecture and ship design, computer-aided design, data analytics and digital twinning, and energy efficient technologies. For example, Seaspan Shipyards is designing and building the Canadian Coast Guard's polar icebreaker and the Royal Canadian Navy's joint support ship, both of which are among the many projects under Canada's National Shipbuilding Strategy (NSS).

### Small Craft Marine Vessels

B.C. is at the forefront of ocean vehicle technology, producing remotely operated vehicles (ROVs), autonomous underwater vehicles (AUVs), submersibles and the world's largest fully electric tugboat fleet. Electric tugboats, pioneered by local operators, represent a significant advancement in alternative fuel technology, enabling quiet and clean daily operations, improving the lives of marine life. Expertise also includes B.C.-based ISE Ltd. which designed and constructed Theseus, a 10.7 metre long AUV that successfully laid several 220-kilometre cables in 600-metre depths under a 2.5-metre-thick ice pack in the Canadian Arctic.



### Ocean Science Research and Technology

B.C. companies offer instrumentation sensors and information systems to measure and process marine parameters, as well as their components. B.C. marine technology expertise also includes acoustics systems and equipment, such as sonars, echo sounders and processing systems. This dynamic industry is supported by specialized programs in ocean science and marine technology offered by various educational institutions and backed by government research facilities and associations.

### Marine Professional Services

B.C. specializes in marine engineering, including the education and training around industrial marine activities. B.C. companies include internationally recognized naval architects, with full-service naval architecture and marine engineering design firms. They also specialize in electrical engineering installations, with clients spanning government, industrial, commercial and marine industries.

### Renewable Energy Production and Infrastructure

Harnessing significant wind, wave, tidal and current resources, B.C. companies are developing new sources of power to help meet the growing demand for clean and renewable energy in Canadian and international markets. Industry and not-for-profit organizations such as Clean Energy BC, Alacrity Canada and the West Coast Wave Initiative work to accelerate and promote B.C.'s marine energy sector.

## World-Class Research Institutions and Centres

Strong connections between British Columbia's research and academic institutions and our commercial sector build a strong and forward-looking culture.

Leading research institutions and centres include:

INSTITUTION	AREAS OF FOCUS
<p><b>University of British Columbia, Department of Earth, Ocean and Atmospheric Sciences</b></p>	<p>A rich interdisciplinary department, covering biology, chemistry, geology and physics, offering graduate education and research in oceanography. The UBC Institute for the Oceans and Fisheries leads in marine sustainability.</p>
<p><b>University of Victoria, School of Earth and Ocean Sciences</b></p>	<p>Excelling in ocean, earth and atmospheric research, from acoustical oceanography to climate modelling. The University of Victoria's Ocean Networks Canada Innovation Centre leads in ocean data and monitoring with large observatories: NEPTUNE in the North East Pacific and VENUS in the Salish Sea.</p>
<p><b>Bamfield Marine Sciences Centre</b></p>	<p>A world-class teaching and research facility on Vancouver Island jointly operated by the Universities of British Columbia, Victoria, Simon Fraser, Alberta and Calgary. Facilities include research space, aquarium facilities, boats, diving equipment, library, lecture hall and accommodations.</p>
<p><b>British Columbia Institute of Technology, Marine Studies</b></p>	<p>Offering state-of-the-art bridge and engine room simulators for marine training in navigation, engineering, seamanship, safety and security, enhancing global industry readiness capabilities since 2011.</p>
<p><b>Camosun College, Nautical Training Transport</b></p>	<p>Transport Canada certified nautical training in nautical technology and ship management for professional seafaring careers.</p>
<p><b>Ocean Wise Research Institute</b></p>	<p>Ocean Wise Research Institute hosts more than 30 researchers studying ocean sciences, coastal impacts and biodiversity. Ocean Wise, founded in 1951, now addresses global environmental challenges through its charity endeavours.</p>
<p><b>Fisheries and Oceans Canada</b></p>	<p>Ensuring healthy and sustainable aquatic ecosystems through habitat protection and sound science while supporting economic growth and innovation. Includes Canada's largest marine institute, the Institute of Ocean Sciences, the long-standing fisheries research centre, the Pacific Biological Station and the newly developed Pacific Science Enterprise Centre.</p>

## Supportive Government

The Government of British Columbia actively supports buyers and investors through competitive taxes, an open economy and international trade missions, particularly benefitting marine technology companies. With our business-friendly environment and abundant trade opportunities, B.C. attracts investment from all over the world.

### Support Programs for Business

- Shipbuilding and ship repair industry tax credit — a tax credit for eligible employers that employ apprentices in the B.C. shipbuilding and ship repair industry.
- B.C. Supply Chain Resiliency and Value-Added Manufacturing Grant— delivering \$16 million in grant funding to B.C.'s manufacturing community, including more than \$1.2 million in grants for companies and organizations in the industrial marine sector.

### Encouraging Investment and Growth

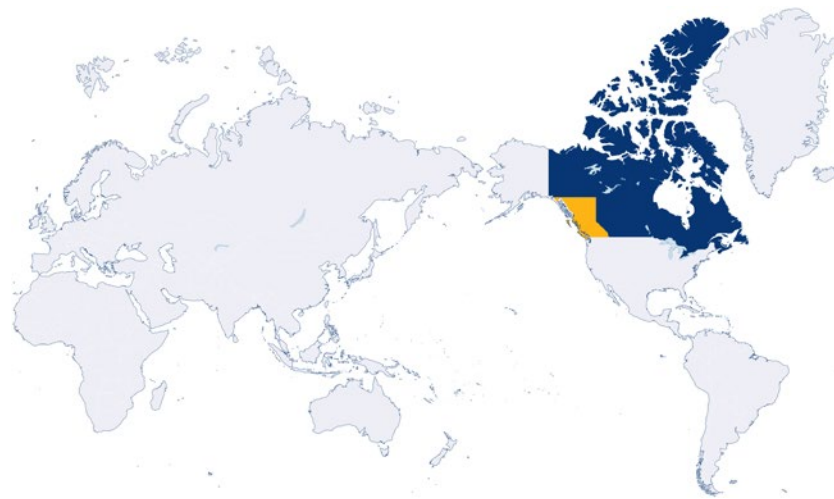
- Coast Conservation Endowment Fund Foundation (Coast Funds)— in collaboration with the Government of B.C. and backed by a \$60 million grant and a strategy aiming for over \$200 million in investments. The initiative supports sectors like fishing, tourism and renewable energy.
- British Columbia is a key player in Canada's National Shipbuilding Strategy (NSS), allocating over \$2 billion in contracts to Canadian firms, with Seaspan ULC receiving a multi-billion-dollar non-combat fleet renewal program. Seaspan's \$185 million investment transformed Vancouver Shipyards into a state-of-the-art facility, making it a leading shipbuilding center in North America.

### B.C. Maritimes Industries Strategy

- Launched in 2023 to build marine sector capacity, capability and competitiveness.
- Includes the \$25 million B.C. Maritime Industries Infrastructure Modernization and Expansion Grant Program.
- Invests in maritime talent, reduces labour shortages and creates more jobs for British Columbians through the StrongerBC action plan.
- Leverages B.C.'s clean technology innovation ecosystem to find clean and innovative ways to power vessels and operations to gain a competitive advantage.



- B.C.'s general Corporate Income Tax rate is 12%. When combined the federal rate, businesses pay an overall rate of 27%.
- B.C.'s geographic location and historic investment in maritime industries have created a competitive advantage.
- B.C. is home to Canada's two largest ports and busiest trade routes, and over 1,000 industrial marine companies.



## B.C.'S Environmental, Social and Governance (ESG) Advantages

In British Columbia, like-minded individuals, businesses, communities and Indigenous peoples are partnering to create an economic and investment climate that is environmentally, ethically and economically conscious. Policies are in place to reflect the values of British Columbians — from a climate plan that protects the province's prized clean air to human rights laws that help to protect all people from discrimination.

- B.C. supports emissions reduction via CleanBC Program, offering tax incentives and funding for innovative projects.
- B.C. is the most ethnically diverse province in Canada. Almost 30 per cent of British Columbians immigrated to B.C. from another country.
- B.C. is home to InBC Investment Corp., a \$500 million strategic investment fund introduced by the provincial government in 2020, which will invest on a triple bottom line basis to generate financial returns alongside measurable economic, social and environmental impacts for the province. B.C. also hosts a variety of private impact investment funds.



## British Columbia's Competitive Advantages

- **Prime location on Canada's West Coast**
- **Well established federal and provincial funding programs**
- **Skilled, experienced and deep talent pool**
- **Canada's two largest ports and busiest trade routes**
- **World-class research institutions, post-secondary and technical training institutions**
- **Globally recognized maritime capabilities**
- **Environmental and ethical leadership through CleanBC and the provincial Environmental, Social and Governance (ESG) Centre of Excellence**

## Join these world-class companies making waves in British Columbia, including:

- 3GA Marine ■ Ballard ■ Barnacle Systems ■ Cellula Robotics ■ Current Scientific
- Helm Operations ■ Kingfisher Boats ■ Open Ocean Robotics ■ OSI Maritime
- Point Hope Maritime/Ralmax ■ Robert Allen Ltd. ■ Seaspan ■ Stage 3 Systems
- VoltSafe ■ Zodiac Technologies

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