



Prince Rupert Grain, B.C. – Photo by Prince Rupert Port Authority.

Minister's message

The StrongerBC Economic Plan was launched in 2022 to tackle some of the biggest challenges of our time, while growing a clean and inclusive economy that works for all British Columbians.

A key part of the plan is increasing the growth and competitiveness of B.C.'s vital maritime sector. With more than 25,000-kilometres of invaluable coastline and home to Canada's two largest and fastest growing ports and busiest trade routes, the new B.C. Maritime Industries Strategy charts the course forward. The Strategy will open new jobs and market opportunities, while helping the Province meet its climate commitments, and advancing reconciliation with Indigenous peoples.

The demand for workers in shipbuilding, ship repair and the marine industry is high, and as the sector continues to embrace technology and innovation, there is a growing need for an even broader range of skilled people to fill new and emerging roles. It's critical that we maintain the momentum of this booming sector, which is why our Province is accelerating talent development and skills training through our StrongerBC: Future Ready Action Plan.

Our deep appreciation goes out to our partners, leaders and industry professionals for their invaluable contributions and support in developing this strategy. We heard from domestic ship owners, new build, maintenance and ship repair yards, government partners, First Nations, post-secondary institutions, economic development agencies and regional industry associations who told us how we can enhance collaboration and increase partnerships for better co-operation, co-ordination and planning.

Working together, we will continue to establish the province as a global maritime industry leader, so more B.C. businesses in the sector can innovate and expand, and more British Columbians can build well-paying, secure careers. We are building an economy that works for everyone today and for generations to come.



A blue ink handwritten signature of Brenda Bailey.

Honourable Brenda Bailey

Minister of Jobs, Economic
Development and Innovation

The opportunity

British Columbia's maritime sector is one of the largest in Canada, generating jobs in a diverse set of industries that include ship building, refit and repair; marine industrial services and products; small-craft building and repair; ocean sciences technology; and marine professional services. The sector plays a critical role in the provincial economy by connecting coastal communities and hosting essential infrastructure, including shipyards, ports and other maritime facilities.

This *B.C. Maritime Industries Strategy* is focused on building a strong and prosperous maritime sector that advances Indigenous reconciliation and incorporates sustainable practices for environmental stewardship to preserve our diverse ocean ecosystems along our beautiful coast.

The Strategy will establish B.C. as a leader in innovative and high-value industrial maritime activity in keeping with our social, environmental and economic values. It identifies immediate areas for action and aligns the maritime industry with other key provincial initiatives such as the *StrongerBC Economic Plan*, *CleanBC Roadmap to 2030* and the *B.C. Coastal Marine Strategy*.

Immediate provincial actions will:

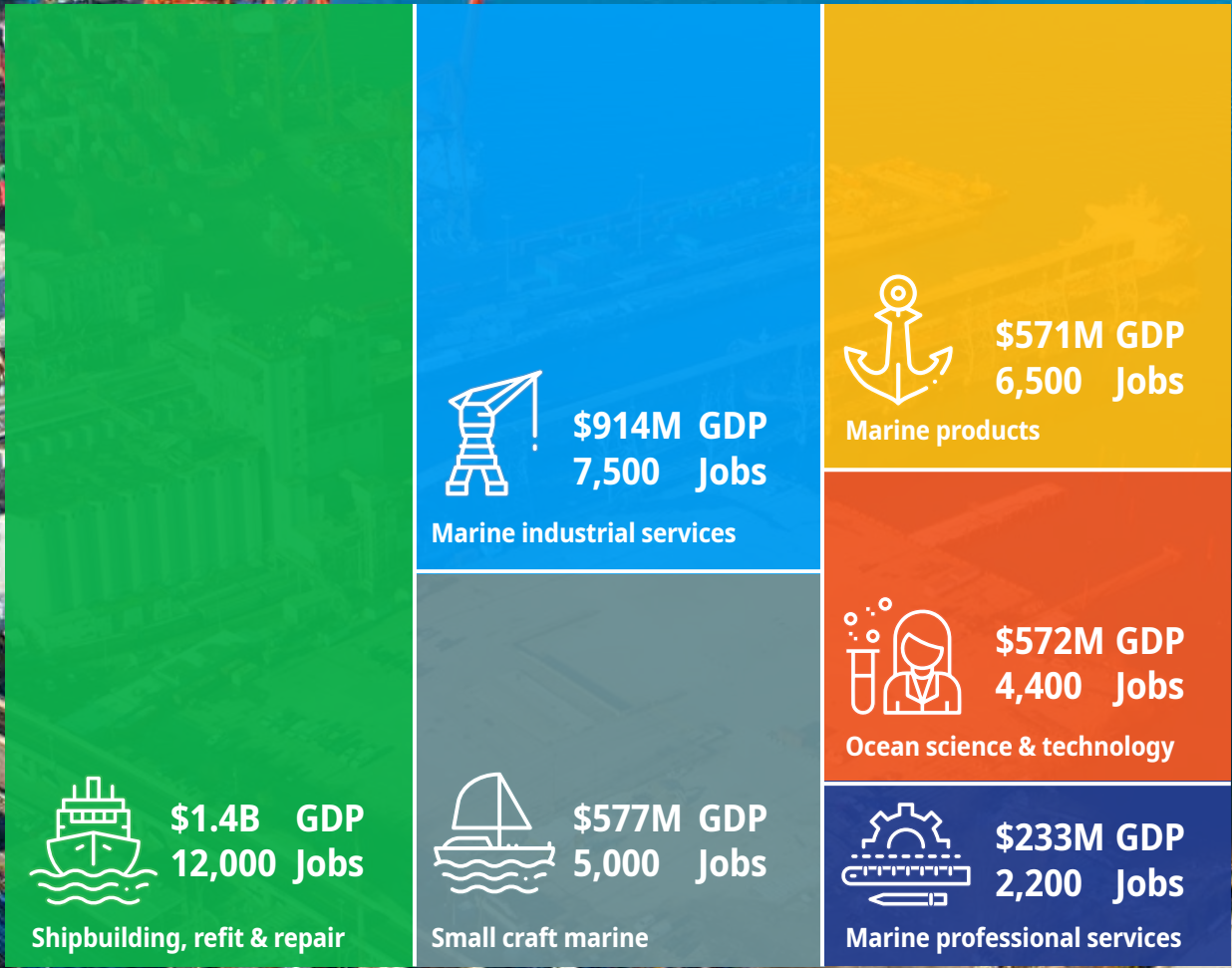
- ▶ Amplify sector co-ordination by creating a West Coast Maritime Office with industry partners and key stakeholders in support of provincial maritime growth.
- ▶ Modernize and upgrade maritime infrastructure through a \$25 million *B.C. Maritime Industries Infrastructure Modernization and Expansion Grant Program* to build capacity and increase competitiveness to support more shipbuilding, refit, repair and maintenance.
- ▶ Invest in people through the *StrongerBC: Future Ready Action Plan* to increase maritime talent, alleviate immediate labour shortage pressures and create good, well-paying jobs for more British Columbians, including Indigenous peoples.

- ▶ Advance provincial maritime energy, economic and environmental priorities. The Strategy will continue to build on maritime sector momentum such as the \$5.75 million investment by the Province's Innovative Clean Energy Fund in 2023 toward collaborative blue economy and clean innovation projects.

B.C.'s maritime advantage

- ▶ Principled environmental and ethical leadership through *CleanBC* and the provincial Environmental, Social and Governance (ESG) Centre of Excellence.
- ▶ Home to Canada's two largest ports and busiest trade routes.
- ▶ World-class research institutions and globally recognized maritime capabilities.
- ▶ Home to the Royal Canadian Navy's Maritime Forces Pacific and large vessel construction under the National Shipbuilding Strategy.
- ▶ Internationally recognized network of post-secondary and technical training institutions.
- ▶ Cross-sector leadership and support for advanced manufacturing and clean technology.
- ▶ Highly respected naval architects, marine engineers, and service providers.

British Columbia's maritime industries consists of ¹



¹ KPMG and Association of B.C. Marine Industries, *B.C. Industrial Marine Industry Economic Impact Analysis and Subsector Assessment Report*, March 2022. Page 2.

VFPA, B.C. – Photo by Vancouver Fraser Port Authority



B.C.'s maritime industries sector

For more than a century, the province's maritime sector has weathered the rise and fall of economic cycles. Within the last decade, Canada's National Shipbuilding Strategy² has created long-term opportunities for the province's maritime industries, revitalizing vessel construction capabilities, generating strong demand for overhaul, refit, maintenance and repair services and spurring the innovation of exciting new capabilities and technologies across the supply chain.

B.C.'s maritime sector is the largest in Canada, generating approximately \$4.0 billion in total output, and sustaining jobs for 34,250 people.³ It provides jobs for British Columbians in a diverse set of areas that include ship and boat building, refit and repair, research and technology, marine products, marine professional services, and ocean science and technology. The sector plays a critical role in the provincial economy, connecting coastal communities through maritime logistics and shipping; marine infrastructure; and a variety of industry segments that serve the province's coastal regions.

Since 2010, the maritime sector has benefited from the National Shipbuilding Strategy, which marked a new approach for procuring and maintaining federal vessels to provide long-term, predictable workflow for Canadian shipyards.

The province's shipbuilding, overhaul and repair industry provides the foundation and platform for continued sector growth and gives the industry a competitive advantage in the face of technological

change. Businesses in this sector are using advanced computerized systems to design, model and construct new vessels, and innovative technologies are regularly installed on vessels of all sizes. We have an opportunity to export these and other made-in-B.C. solutions to meet growing demand worldwide.

The shift towards broad-based decarbonization across the maritime sector is creating opportunities for clean technologies and services, including electrification and fuel conversions. B.C.'s maritime sector also includes experienced companies with global reputations in naval architecture and ship design, computer-aided design, data analytics and digital twinning, and energy efficient technologies. These maritime businesses support province-wide commerce, transportation, trade and related maritime operations; and, there are opportunities to support these businesses to grow into new international markets.



² [Canada's National Shipbuilding Strategy](#)

³ KPMG and Association of B.C. Marine Industries, B.C. Industrial Marine Industry Economic Impact Analysis and Subsector Assessment Report, March 2022. Page 1.



B.C.'s maritime sector

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The path forward

The *B.C. Maritime Industries Strategy* is based on four integrated pathways that build on our strengths and maximize our opportunities.

Pathway #1: Enhance co-ordination within B.C. maritime industries

Pathway #2: Grow market and infrastructure capacity


Pathway #3: Invest in workforce development

Pathway #4: Support clean fuels and technology innovation

The Province appointed an Advisory Committee in September 2021 to identify the specific needs of the maritime sector and make recommendations for the province's maritime industries. Committee members shared their insight and proposed strategic actions to support robust, sustainable and innovative shipbuilding, ship repair and related maritime industries aligned with the B.C. government's goal to support the inclusive growth of this sector.

A multi-month engagement process included a survey and a series of roundtable and one-on-one discussions with sector stakeholders such as domestic ship owners, newbuild, maintenance and ship repair yards, local governments, First Nations, the federal government, post-secondary institutions, economic development agencies and regional industry associations.





The learnings gathered during the engagement process have guided and shaped this Strategy. Specifically, the need for:

Greater collaboration

to encourage cross-sectoral co-operation, co-ordination and planning, and to facilitate stronger partnerships between sector stakeholders and both the provincial and federal governments.

More education and upskilling opportunities

to train and attract a future-ready workforce and build inclusive and equitable opportunities for all British Columbians who want to be part of the maritime sector.

Targeted support

to address pressing labour issues; promote the competitiveness of B.C. shipyards for overhaul, refit, maintenance and repair; and to alleviate financial barriers associated with implementing clean technologies.

Increased infrastructure

to modernize, scale and expand existing industrial maritime infrastructure, and to attract new market demand and investment.

More opportunities for innovation

to encourage the uptake of innovative and clean made-in-B.C. technologies and to scale and grow market share for B.C.-based clean technology suppliers.



Pathway #1

Enhance co-ordination within B.C. maritime industries

When we paddle together, we can go farther and get to our destination faster. By creating more opportunities for sector participants to collaborate, we will see greater success for all.

Co-ordinated efforts within existing mandates and programming will support and complement west coast opportunities for growth in areas that include workforce development to match skills and sector need, advocacy for federal vessel construction contracts and domestic and international fleet maintenance contracts, and the facilitation and delivery of clean initiatives.

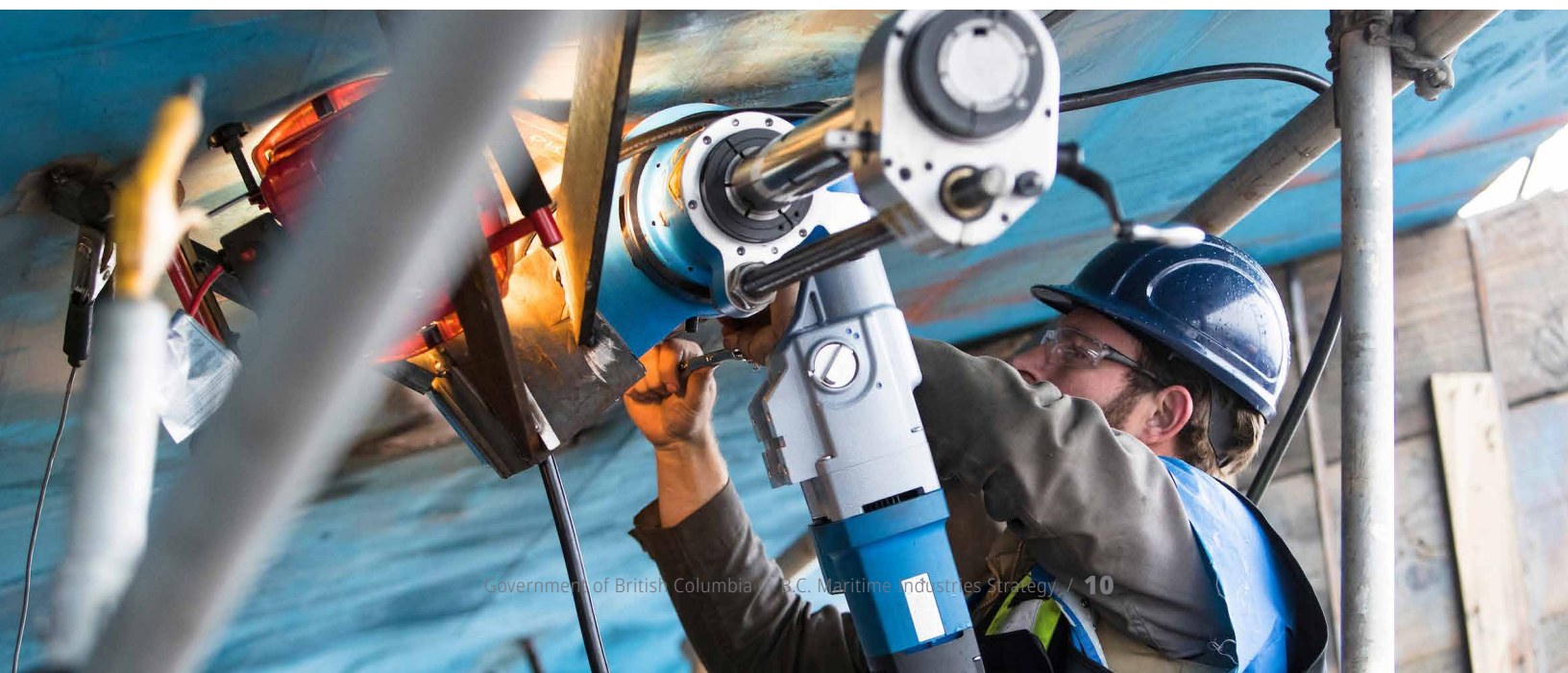
Greater collaboration will promote the value, visibility and contributions of B.C. maritime industries.

The following priority actions support increased co-ordination:

- Establish a West Coast Maritime Office to support provincial maritime ambitions and serve as a concierge that connects B.C.

companies with programming and growth opportunities, collaborates with key sector partners on relevant issues, oversees strategic provincial investments to grow capacity and competitiveness, and promotes the sector to domestic and international markets.

- Facilitate opportunities for collaboration between B.C. shipyards to increase their capacity to respond to National Shipbuilding Strategy and other federal marine procurement initiatives.
- Partner with First Nations to better understand their goals and priorities in maritime industries, support Nation-led initiatives, and reflect Indigenous perspectives across all pathways of the Strategy.
- Explore future-forward ideas and opportunities development for industry, including measures to encourage increased uptake of B.C.-based innovative technologies, products and services, and collaborative partnerships.





Amplifying efforts to enhance co-ordination

The **West Coast Maritime Office** will be the lead for the B.C. Maritime Industries Strategy, and work with sector stakeholders to advance B.C.'s maritime economic interests and facilitate growth opportunities to build capacity, competitiveness and diversity in support of maritime industry development.



Pathway #2

Grow market and infrastructure capacity

Demand for shipyard capacity in B.C. is high, emphasizing the importance of expanding our existing maritime infrastructure to support growth. The ability to provide ongoing in-service support for the Royal Canadian Navy, the Canadian Coast Guard and BC Ferries is key to maintaining the health of this sector.

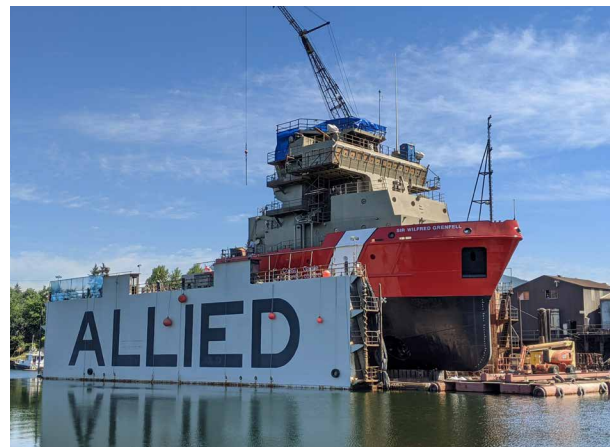
With an established reputation for high-quality work for custom refit and repair projects, designers, shipyards and domestic ship owners are working together to develop and incorporate new clean technologies on ships repaired in B.C. yards. These modifications to install clean technologies are generating an emerging market for this work in our province.

The largest shipyards in B.C. are in direct proximity to the Port of Vancouver, North America's third busiest trade route for deep sea vessels and cruise ships. These commercial, cruise and domestic vessels – complemented by a thriving fleet of tugboats, barges, pilot boats, ferries and other domestic craft – represent an important market opportunity and justify expanding existing drydock capacity to attract new business and increase market competitiveness.

B.C. maritime firms, particularly those working in the area of naval architecture, clean technology, digital twinning, and ship software design, are internationally recognized for their niche expertise. There is an opportunity to connect these companies with others along the maritime supply chain, including domestic shipyards, which will provide export opportunities in areas where B.C. has competitive strengths.

The following priority actions support the growing demand for services:

- Provide \$25 million to support projects that contribute directly to the modernization, scale and expansion of industrial maritime capabilities and infrastructure.
- Establish collaborative industry-government forums that support the innovation and competitiveness of B.C. shipyards.
- Identify opportunities to encourage domestic ship owners and shipyards to source and implement B.C.-based technology, products and services along the maritime supply chain, including federal and commercial contracts and other procurements.
- Explore co-investment opportunities with federal partners and regional stakeholders to increase B.C.'s market share and competitiveness.
- Continue to support and increase opportunities with B.C.-based industry coalitions to strengthen programs, events and resources that promote external trade.





Supplier development initiatives

Providing support for certifications and process improvements helps B.C.'s smaller clean-tech companies become supply chain ready for opportunities with large companies. These local market opportunities enable businesses to develop and enhance their products and services, gain experience and invest in the efficiencies, enhancements and productivity improvements needed to sell into larger markets.



Pathway #3

Invest in workforce development

Demand for labour in shipbuilding and ship repair in British Columbia is the highest it has been in decades. There is intense competition for skilled labour and management among shipyards and boat builders, as well from other industries, such as construction and resource development, who also rely on people with similar trade certifications or skill sets.

The shipbuilding industry is embracing technological change, and there is a growing need for skilled employees with high-level technical training in data analytics, machine learning, automation and fuel conversions, and for employees who are able to install, maintain and repair complex and technologically advanced equipment.

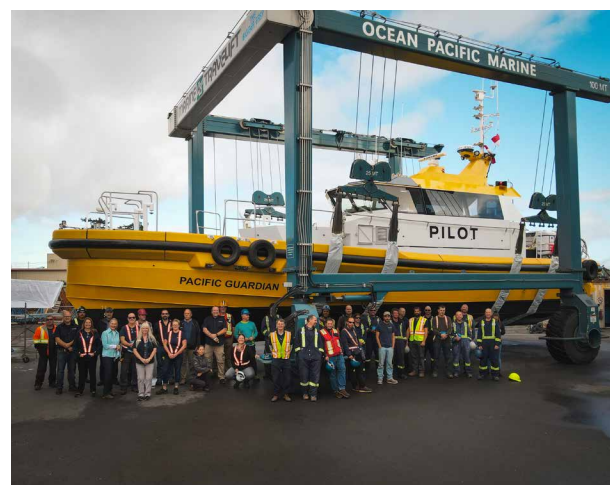
Investments in workforce training will help industry players secure the labour they need to thrive. These investments will also support inclusive growth by targeting groups typically underrepresented in the sector, such as women, Indigenous peoples and racialized groups.

The *StrongerBC: Future Ready Action Plan* will equip B.C. with the most inclusive and talent-driven workforce in Canada through reskilling and closing labour supply and skills gaps, and maximizing supports for British Columbians who have historically been left behind.

Specific *Future Ready* initiatives will help maintain and increase maritime talent. This will alleviate immediate labour shortage pressures and create good, well-paying jobs for more British Columbians, including Indigenous peoples.

The following priority actions support the growth and development of the maritime workforce:

- Explore just-in-time, short-term training that responds to industry and employer demand.
- Support B.C. maritime industries to identify and pilot innovative workplace solutions to anticipated labour supply shortages.
- Enhance initiatives to attract youth to the industry and expand work-integrated learning opportunities to raise awareness of modern shipbuilding career possibilities and to attract new entrants to the workforce, with a specific focus on women and Indigenous and racialized youth.
- Partner with Indigenous people to identify and understand the opportunities and success pathways to increase participation and retention in the maritime sector.





Investing in people

A more co-ordinated approach to training, driven by industry needs, will help attract new talent into the shipbuilding sector and ensure that workers have the competencies and skills to stay on top of latest industry trends, and contribute to a thriving provincial maritime sector.



Pathway #4

Support clean fuels and technology innovation

The International Maritime Organization⁴ aims to cut global shipping industries carbon emissions in half by 2050 compared to 2008 levels. Canada has committed to zero-emission shipping by 2050 and to emissions reductions of 40 to 50 per cent by 2030, and has established a Green Shipping Corridor to support zero-emissions technologies for cruise ships sailing between Seattle, Vancouver and Alaska. Provincially, the *CleanBC Roadmap to 2030* will support emission reduction commitments with actions that drive demand for innovative, safe and reliable clean technology solutions; zero-emissions fuel storage, handling and propulsion systems; and for port cities and their surrounding maritime supply chain to adopt clean practices and technologies.

B.C. is ready to meet this technological challenge. We are home to a thriving ecosystem of knowledge-based clean technology companies, maritime cluster platforms and a broad network of high-quality manufacturing businesses and post-secondary institutions that bring together the infrastructure, capacity and talent to leverage this economic opportunity. Many of our products and services are already well in advance of others in the global market, giving B.C. innovators a competitive edge.

The future of the sector is one of advanced technology and low-carbon fuels. There are opportunities to support a zero- to low-emission-fuel-based strategy by encouraging research and development into technologies and commercial

applications of new propulsion, storage and handling systems. Leadership in cross-sector co-ordination is required to determine the province-wide demand for these systems and direct the necessary research in this area.

The following priority actions support the decarbonization of the sector:

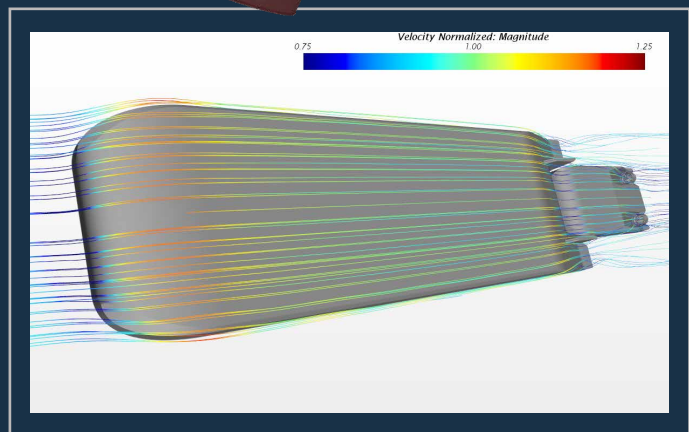
- Provide support for maritime industry initiatives through provincial programs such as CleanBC Go Electric Advanced Research and Commercialization Program, the Innovative Clean Energy Fund and the Go Electric Commercial Vehicle Pilots Program, as well as through Innovate B.C.'s support for the provincial decarbonization transition and acceleration to net-zero emissions.
- Leverage existing programs such as B.C.'s Low Carbon Fuel Standard to drive investment in clean fuels and technology.
- Enhance linkages between specialized industry capabilities and technologies and maritime cluster activity on the west coast, including industry-driven collaborative partnerships and projects to accelerate piloting, commercialization and scale of transformative, sustainable and clean innovation.
- Explore Indigenous maritime innovation and opportunities for scaling green technology, supporting First Nations owned ventures and serving remote communities.

⁴ the International Maritime Organization is a specialized agency of the United Nations, responsible for regulating global maritime shipping. Its primary purpose is to develop and maintain regulatory standards for areas such as maritime safety, environment, legal and technical matters.



Supporting zero- to low-emission fuels

The drive to decarbonize the maritime sector relies on adopting zero- and low-emission fuels and requires innovation at all levels. Increasing the resources allocated to researching and developing technologies that support the adoption of these fuels – combined with leadership in cross-sector co-ordination – will identify province-wide market demand and direct necessary research in this area.





Enhance maritime industry co-ordination

Creating more opportunities for sector participants to collaborate will deliver success for all.

Greater levels of co-operation will attract investments, grow our competitiveness, and promote awareness of our sector to domestic and international markets.



Grow market and infrastructure capacity

Investing in new infrastructure and modernizing existing assets will enable shipyards to meet growing market demand for their high-quality services.

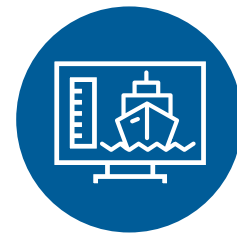
Creating more opportunities for other companies in the supply chain will enable them to grow markets for their products and services.



Invest in workforce development

A strong, resilient and inclusive maritime industry requires well-trained people with specialized knowledge and skills.

By increasing investments in workforce training, industry will be able to secure the labour it needs to flourish.



Support clean fuels and technology innovation

We can leverage the power of B.C.'s clean technology innovation ecosystem to find clean and innovative ways to power vessels and operations.

Continued support for research, development and commercialization will enable companies along the maritime supply chain to gain a competitive advantage.



Conclusion

B.C.'s location on Canada's west coast has defined our province's history and will continue to shape our future. Our deep connection to coastal ecosystems has led us to develop remarkable innovations – from the dugout cedar canoes used by coastal First Nations for thousands of years to the electric tug boats working in our harbours.

We understand that the prosperity of our people and communities depends on healthy ecosystems and competitive businesses that support sustainable jobs. Investing in B.C.'s maritime industry will build a strong and prosperous future with well-paying employment in communities along our coasts. It will establish our province as a leader in innovative and high-value industrial maritime activity aligned with our social, environmental and economic values.

With the positive momentum generated by the National Shipbuilding Strategy, the broader context of industry decarbonization, and the vision of StrongerBC and its focus on clean and inclusive growth, this is an ideal time to invest in a sector that is central to B.C.'s history and economy.

The integrated pathways of this Strategy are supported through thoughtful actions that bring together a diverse community of stakeholders to leverage our competitive advantage to:

- Make it easier for sector stakeholders to collaborate on initiatives to grow our capacity and be more competitive both nationally and internationally.
- Increase the value of the shipbuilding, refit, repair and maintenance subsector as a result of new infrastructure investments.
- Strengthen the capacity of our workforce to meet industry's need for specialized skills and increase the participation of historically underrepresented groups.
- Position B.C. as a leader in clean fuels and technology innovation.

By pursuing the actions outlined within this Strategy, communities, businesses and individuals across our province will benefit from a prosperous maritime industry recognized locally and internationally for its innovation, inclusivity and commitment to sustainable growth.



StrongerBC

for everyone

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