

The Vancouver Fraser Port Authority is developing a new Active Vessel Traffic Management (AVTM) Program in cooperation with the Canadian Coast Guard and the Pacific Pilotage Authority, and with support from Transport Canada.

The port authority will be a steward in managing prioritization and sequencing of vessels to improve transparency, efficiency, and reliability for all port users, and increase throughput for trade-enabling vessels.

The initial project focus has been to establish marine traffic governance using input from industry stakeholders. A centralized vessel-scheduling system will be developed and implemented to enable efficient movement of vessel traffic, reduce overall anchorage use and promote gateway fluidity. It is expected that the program roll out will begin in late 2022 with Traffic Control Zone 2 (Second Narrows), before being expanded to cover the entire Port of Vancouver.



Gathering input from stakeholders

Through the summer and fall of 2021, the port authority hosted meetings with a series of partners and stakeholder working groups.

The broader industry was invited to a series of kick-off and informational sessions in late summer, with participation from representatives of terminals, shipping lines, cruise lines, domestic operators, and industry associations.

The port authority then established various cross-functional working groups to gather early program design input from supply-chain partners and stakeholders. In November, the port authority led a Port Optimization and Digitalization workshop with supply-chain partners to lead the development of a clear roadmap of a future state of operations using vessel-scheduling process improvements and digital technology. This roadmap seeks to improve efficiency, service levels and supply chain collaboration through a series of future initiatives including AVTM.

Engagement will continue throughout 2022 including expanding to Indigenous groups, communities and the public. This will provide an opportunity for further participation in the development of AVTM processes and sharing the broader aims of the initiative.

Technology-enabled vessel scheduling

In 2022, the port authority will procure a technology solution used by leading ports around the world to support uninterrupted traffic movements and port efficiency. The intention of digitizing vessel traffic management is to improve the efficiency, consistency, and transparency of vessel movements. The project team expects that, as the system is implemented, the approach and supporting processes will continue to be refined. As such, the technological framework will need to accommodate on-going adjustments to ensure it can meet future needs.

The technology solution will support the conceptual process, shown below, of gathering relevant information, developing and communicating a prioritized schedule for vessels requesting transit, and monitoring alternative schedules that could drive increased efficiency.



In December 2021, the port authority issued a Request For Proposal (RFP) to seek proposals from the market to supply this technology. The scope of work outlined in the RFP was informed by input received through an earlier Request for Expressions of Interest (RFEOI) issued in August 2021. The RFEOI vendor responses and demos instilled confidence that existing technologies have been successfully developed to reduce congestion and maximize port efficiency. The port authority is looking for a proven track record for both the technical solution and its vendor. Vendors will be evaluated, in part, on their ability to tailor their existing proven technical solution to meet the unique attributes of the Port of Vancouver.

2022 and beyond

It is expected that the long-term benefits of AVTM will include:



Strengthening marine safety

Reducing congestion and actively managing marine traffic in the busiest, most confined waters of the port



Improving the efficiency and reliability of the flow of goods

Optimizing processes through the gateway, such as vessel-scheduling, for all supply-chain partners



Reducing environmental impacts

Reducing noise impacts to southern resident killer whale habitat by limiting unnecessary vessel movements



Minimizing social impacts

Reducing overall anchorage usage in southern BC and implementing a Code of Conduct for vessels at anchorage

The port authority's focus in 2022 will be on collaborating with industry and other key stakeholders to develop the processes and systems to start a pilot in Traffic Control Zone 2. As it moves forward, AVTM will play a foundational role in advancing long-term optimization and digitization at the Port of Vancouver. The program will be implemented in phases, eventually expanding across the entire port.

For more information

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