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INTERVIEW OF THE MONTH



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Fulvio Fracassi has been Chief Executive Officer of the Laurentian Pilotage Authority (LPA) since 2012. Before joining the LPA, he was Director General of Transport Canada's National Maritime Security Program. Mr. Fracassi graduated from McGill University in civil law and common law and obtained a Master of Laws from Osgoode Hall Law School. He is a member of the Québec Bar and Ontario Bar and holds a Commercial Pilot License (Aviation).

Question 1: Since its creation, in 1972, the Laurentian Pilotage Authority (LPA) has consistently sought ways to optimize the efficiency and quality of its pilotage services. In recent years, you acquired and developed your navigation simulator. Could you tell us what it is and how it affects the professional development process?

Answer 1 : The LPA's priority is to optimize navigation safety and efficiency and to increase the quality and effectiveness of our pilotage services. A few years ago, we made major technological changes to support us in this process. In December 2017, we acquired a navigation simulator, which, since then, has allowed us to increase our expertise in maritime pilotage and enhance our performance. This cutting-edge simulation centre is located in our

Montréal head office. It consists of a main bridge and two secondary bridges and was developed in collaboration with other industry partners. We are constantly working to improve it, enhancing the realism of the physical environments and perfecting the maneuverability of the ships modelled. Recently, we reproduced the ports of Montréal, Trois-Rivières and Québec and integrated the effects of marine currents and high-density bathymetry into the databases. Up-to-the-minute and available to our industry partners, our centre for simulation and expertise already allows studies and research to be conducted and best pilotage practices to be developed. It currently focusses on the following four points:



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- Developing best pilotage and navigation practices to increase navigation safety, efficiency and effectiveness;
- Supporting maritime and port projects to make them safe, efficient and effective for pilotage and navigation;
- Reproducing marine incidents in a controlled environment so as to better understand given situations and implement mitigating measures, and offering specific training for captains and pilots involved in an incident;
- Training captains and officers and, in future, assessing pilotage candidates.

For example, one project under development analyzes interactions between moving ships and hydraulic effects in restricted waters. We recently also conducted a study on the “human factor”, which is a key cause of marine incidents, and performed other analyses that led to the development of a policy containing best communication practices in order to maximize the effectiveness of master-pilot information exchange (MPX) on the bridge. Research is also under way on the impacts of turbulence caused by docking tug propellers. Using the simulator, the project team is studying the possible advantages of modifying docking maneuvers, which would significantly reduce dock damage.

In addition to the progress made on our simulator, we have invested in portable pilot units (PPUs) and rates of turn, thereby eliminating certain night navigation restrictions. A new PPU app was also developed to predict and visualize meeting the wide beam and long vessels included on Chart VN-301

in restrictions zones of the St. Lawrence Waterway.

We are eager to work with the maritime industry and all of the community’s other stakeholders on projects that promote safe navigation in smart navigation corridors in our region and elsewhere.

Question 2 : To improve pilotage efficiency and transit flows on the St. Lawrence, the LPA is working with Innovation maritime to develop new specialized software. What is “optimized pilotage services” and where are you in its development?

Answer 2 : Optimized pilotage services is an LPA initiative aimed at improving the services we offer by supporting our clients’ activities, more specifically by enhancing the transit safety, efficiency and effectiveness of vessels under a pilot’s conduct on the St. Lawrence River.

This project will give LPA clients and partners access to a wealth of information and a great many options. This could, in turn, generate gains in terms of more efficient, effective delivery of pilotage and navigation services on the St. Lawrence. We are currently testing a prototype, which will be honed in a second development phase designed, among other things, to make it possible to better coordinate the passage of oversized vessels and to optimize vessel arrivals and departures based on the availability of the docks and other infrastructures used.

In short, it will help with optimal trip planning by defining the best transit windows available based on the interaction of various administrative, regulatory and physical parameters. the interaction of various administrative, regulatory and physical parameters.



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Question 3 : What are the software's tangible advantages?

Answer 3 : The advantages resulting from implementing this software are significant. Interaction of data gathered from our industry partners will enable users to plan uninterrupted passages, reduce voyage and stopover duration, decrease dock time, cut back on lock transit or anchorage waiting time, lower fuel consumption and GHG emissions, maximize deep draft and air draft, and minimize pilotage costs for the benefit of our clients and St. Lawrence waterway users. Software users will be able to choose what best meets their needs, based on the specifics of their situation.

To do this, the software will integrate pilotage-related data such as notification requirements for accessing pilotage services, availability of pilots, docks, anchorages, tugs and locks, speed limits in the different zones, night navigation restrictions and much more. Many physical parameters will also be taken into account, including predictions concerning currents, water levels, tides, deep drafts, air drafts and bridge clearances.

Question 4 : As governments are working on post-pandemic economic recovery measures, the maritime industry wants, more than ever, to play a frontline role in these initiatives. In this context, what does the LPA see as the challenges and opportunities?

Answer 4 : Government announcements regarding recovery measures are welcome, particularly as concerns funding the Marine

Smart Corridor, which will contribute to post-COVID economic recovery. Activities are expected to return to normal and an upturn in traffic on the St. Lawrence is anticipated.

At the LPA, we will continue to take the precautions needed to protect the health of all our collaborators and to offer our clients prompt, top-quality services. This includes supporting the industry and governments to make navigation even safer, increasingly efficient and more effective, in particular by contributing to the growth of smart navigation corridors on the St. Lawrence River and helping with Québec's and Canada's economic recovery and development. We firmly believe in technological innovation and this is why, for several years now, we have been investing the resources needed for advancing this cause that we hold dear.

This government support and the measures to be implemented mesh perfectly with the development of the optimized pilotage services and marine simulation centre we are actively working on. We will definitely continue to support government measures and maritime industry members since doing so is 100% in keeping with our mission as stated in the Pilotage Act, namely to contribute to and promote safe, efficient, effective navigation on the St. Lawrence and Saguenay rivers. With the industry as a whole, as well as our other partners, we are eager to explore the different possibilities that will enable us to contribute more to the upswing of marine smart corridors and to support our sector's competitiveness.