



MARITIME SIMULATION AND RESOURCE CENTRE

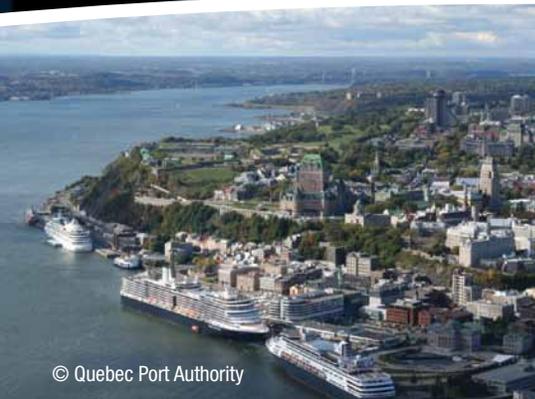
Corporation of Lower St. Lawrence Pilots



Pilot Training

sim-pilot.com

**IN ONE OF THE OLDEST PORT
CITIES IN AMERICA...
THE MAJESTIC CITY OF QUEBEC, CANADA!**



Welcome

The Maritime Simulation and Resource Centre (MSRC) is pleased to offer the comprehensive services of its facility. In operation since 2004, MSRC is a leader in training and development, and holds unique expertise in navigational safety in North America. It is one of the few facilities in the world offering a full range of simulation options ranging from stand-alone desktop simulation to fully interactive, manned tug and large vessel simulations.

For training requiring the knowledge of ship manoeuvres, the MSRC can draw on the vast experience of members of the **Corporation of Lower St. Lawrence Pilots**. The synergy derived from the combination of new technology with pilot experience generates exceptional added value for the MSRC and enables the Centre to offer unique expertise for advanced training.

MSRC also features an in-house database compilation capability, which enables it to build, modify or customize geographic areas and ship models to suit client-specific requirements.



We look forward to hearing from you.

A handwritten signature in black ink that reads 'Paul Racicot'.

Paul Racicot
Director





TO THE CORPORATION OF LOWER ST. LAWRENCE PILOTS

"...You have shown your skills and your dedication to excellence as professionals by establishing, at your own cost, a pilot-owned training facility in Quebec City, equipped with state-of-the-art technology."

Captain Mike Watson

President of the International Maritime Pilots' Association (IMPA) and of the American Pilots' Association (APA)

"Our sincere congratulations on your achievements! What a fine image you project of the river pilot's profession in Canada and what a fine illustration of the Lower St. Lawrence pilots' professionalism."

Captain Frédéric Moncany de Saint-Aignan

President, French Federation of Maritime Pilots



Mission

The Maritime Simulation and Resource Centre mission is to:

- > Provide training for apprentice pilots;
- > Develop and provide skill improvement techniques for its regular pilots;
- > **Develop and provide skill improvement techniques for pilots of other piloted districts (anywhere in the world);**
- > **Design appropriate ship-handling scenarios for pilots as well as for masters and officers;**
- > **Create comprehensive database for any port development project anywhere in the world (using in-house databases development tools);**
- > Run the necessary simulation exercises in order to validate each individual project;
- > Answer any requests from the industry aimed at improving safety at sea.

The Corporation of Lower St. Lawrence Pilots (CLSLP)

Founded in 1860, the Corporation of Lower St. Lawrence Pilots* is comprised of the pilots licensed to serve in the area between the western limit of the Port of Quebec and Les Escoumins in the East, including the Saguenay River.

It is the oldest pilotage district in Canada. Its continuous pilotage runs are among the longest in the world: 123 miles between Quebec City and Les Escoumins, and 172 miles between Quebec City and Saguenay. This district also has many intermediate ports, such as Rivière-du-Loup, Cacouna, Cap-à-l'Aigle, Pointe-au-Pic, Tadoussac, Port-Alfred, Grande-Anse and Saguenay.

* www.pilotesbsl.qc.ca/en/



Relevant Experience

MSRC proposes its proven resources and established competence in integrating all relevant environmental and situation variables, in modelling any physical infrastructure and in planning meaningful and pertinent training programs. It also offers the option of calling on the expertise of CLSLP members to lecture or participate in the proposed training programs.

Below is a list of some of our clients:

- > **Brazilian Maritime Pilots Association, Brazil**
- > **Corporation of Mid St. Lawrence Pilots, Canada**
- > **Corporation of Lower St. Lawrence Pilots, Canada**
- > **Galveston Texas City Pilots, USA**
- > **Houston Pilots, USA**
- > **Atlantic Pilotage Authority, Canada**
- > **Great Lakes Pilotage Authority, Canada**
- > **Canadian Navy**
- > **St. Lawrence Seaway Management Corporation**
- > **Transport Canada (TC)**
- > **Transportation Safety Board of Canada (TSB)**
- > **Canadian Hydrographic Service (CHS)**
- > **Euronav, Greece**
- > **Groupe Desgagnés, Canada**
- > **Rio Tinto Alcan, Canada**

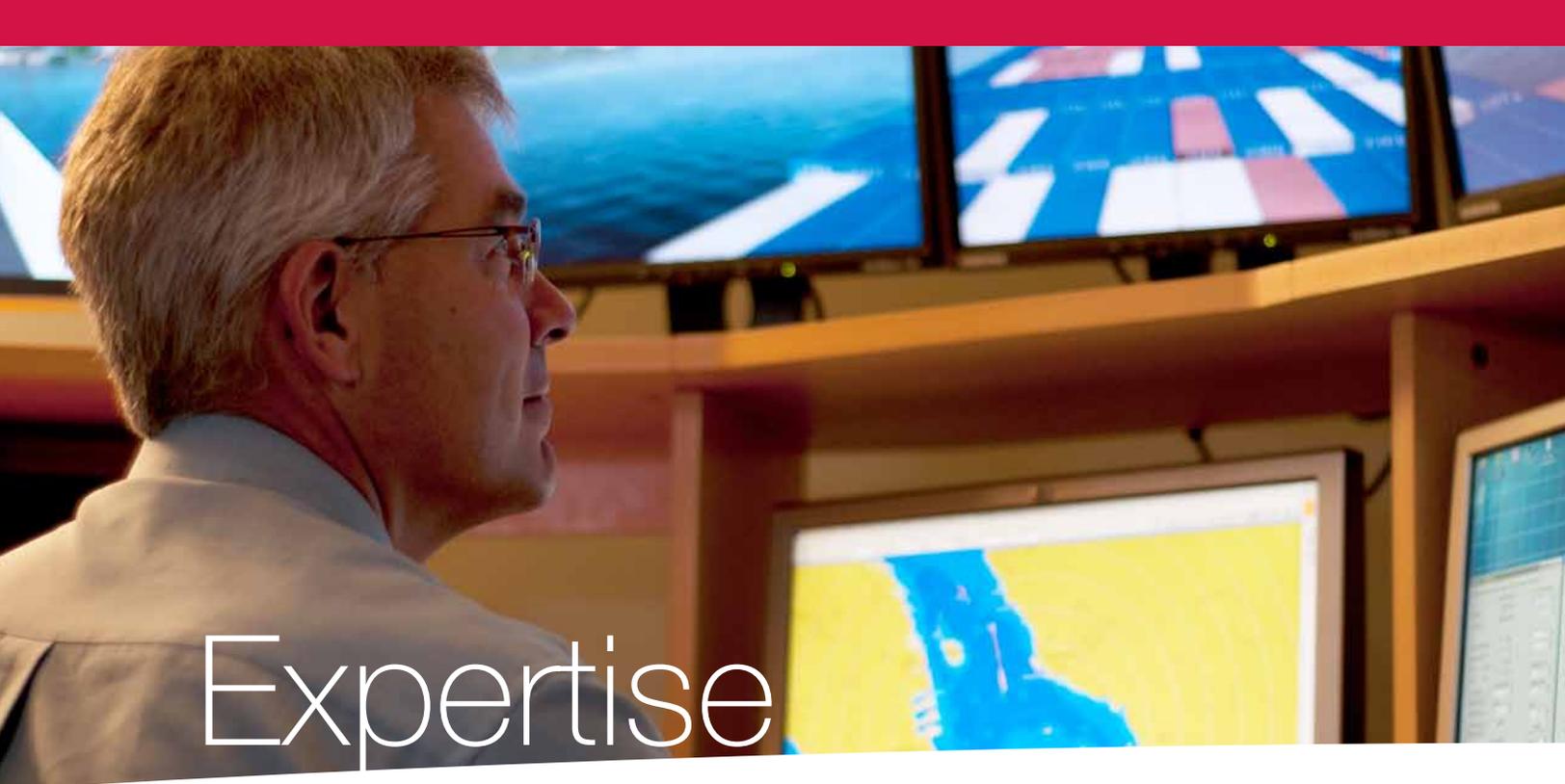
MSRC HAS CONTRIBUTED TO THE ACHIEVEMENT OF OUR TRAINING OBJECTIVES AND IMPROVED THE QUALITY OF OUR PILOTING SERVICES

"MSRC has taken a very proactive approach, in both its training proposals reflecting the new realities of the maritime industry and its custom-designed training programs for our pilots."

Captain Bernard Boissonneault

Canadian Marine Pilots' Association, Vice-President, Laurentian Region





Expertise



Captain Alain Victor, MM,
Commander Étienne Landry, DC,
and Captain Christian Ouellet, MM

Leading Instructors

Simulation Experts

Captain Alain Victor, MM

Captain Alain Victor has acted as the senior instructor for the MSRC since it first began its operations. With a certificate of Master Foreign-Going, Mr. Victor has been working as a simulation instructor for over 30 years. Throughout his career, he has developed several electronic navigation training programs. He has also been a member of many committees and given a few seminars on electronic navigation under the auspices of Transport Canada.

Commander Étienne Landry, DC

Holder of a command certificate with the Canadian Navy, Commander Landry has been working in the military field for 21 years. In the course of his career, he has developed expertise in precise navigation, sonar scanning of seabeds, teaching Canadian Navy pilots and intergovernmental operations with the Canadian Forces. As a naval shipmaster, he has taken part in many deployments all over the world. Until

2008, he was the staff officer in charge of training and operations for Canada's Naval Reserve.

Captain Christian Ouellet, MM

Captain Christian Ouellet has been in the commercial maritime industry for 25 years. He sailed as an Officer and mainly as a Captain on various types of vessels on the Great Lakes, on the St. Lawrence River and the Gulf, and on the East coast of Canada and of the United States. During this period, he also taught at the Institut maritime du Quebec in Rimouski. He later joined Transport Canada as Senior Inspector and between 1997 and 2003, he served as Port Warden, Port State Control Officer, Pollution Prevention Officer and Health and Safety Officer. Prior to joining the MSRC, he was Senior Investigator for the Transportation Safety Board of Canada.

CLSPL's Pilots

Pilots from the CLSPL with various types of experience and expertise are involved in MSRC activities on a daily basis as Instructors, Curriculum Developers, etc.

A TEAM WITH EXCEPTIONAL KNOWLEDGE OF SHIP-HANDLING AND ADVANCED NAVIGATIONAL SKILLS

"...We especially appreciate that the staff is not only largely made up of senior pilots and a few naval officers, all of whom have exceptional knowledge of ship-handling and advanced navigational skills, but they also are extremely well versed in the operation of the simulator itself.

This latter feature is the one that we appreciate the most, as their staff literally has the ability to identify and fix problems when they surface, where most other facilities in North and Central America cannot. Needless to say, this capability leads to a much higher customer satisfaction level."

Captain Gregory Brooks

President, Towing Solutions, Inc., USA



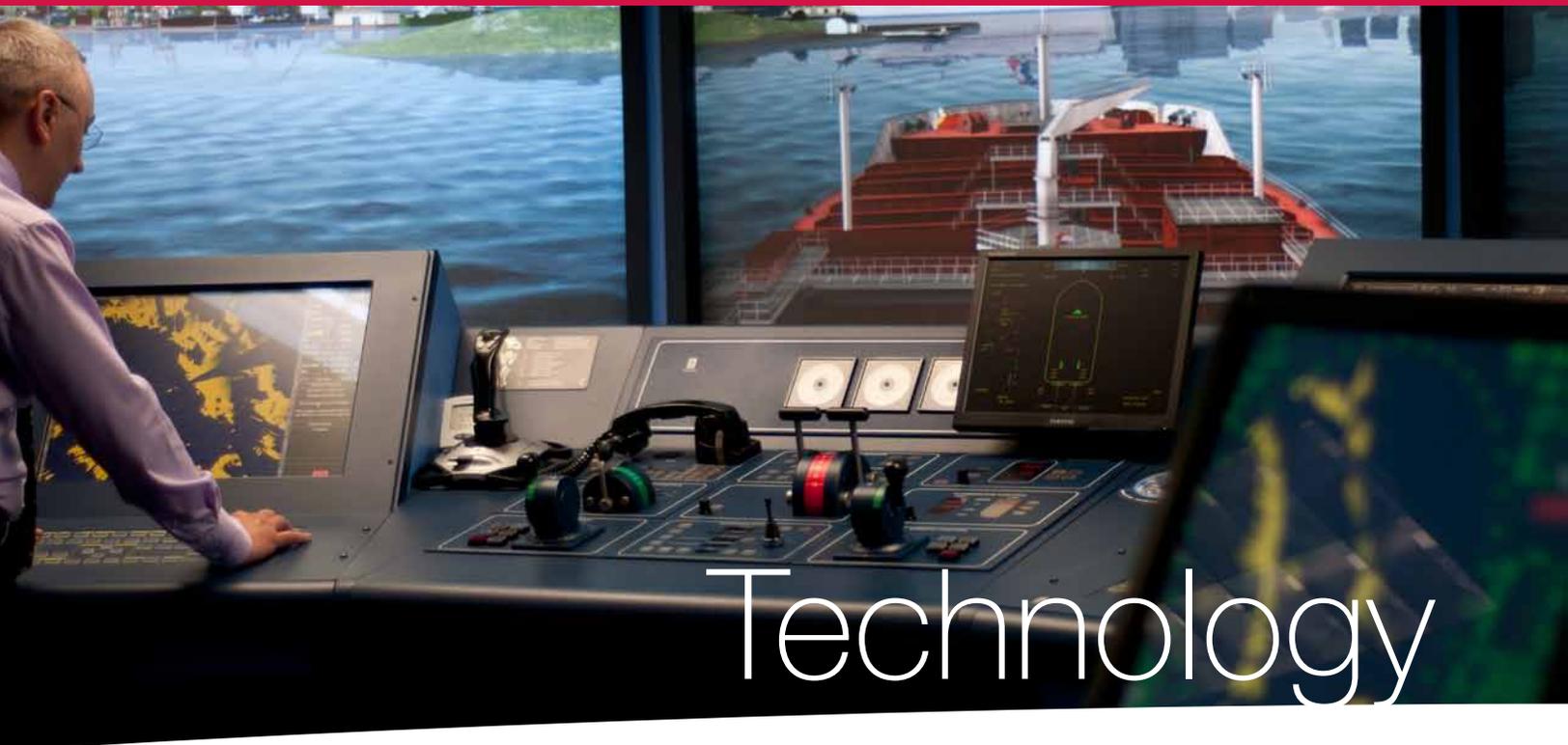
IT IS A MUST FOR ALL PILOTS

*“Even though, as a pilot, I already had all my STCW radar training courses, as well as almost 15 years’ experience working with every type of equipment available on the Amazon River, I decided to take the ‘**Error Detection and Use of Advanced Radar Techniques in Restricted Waters**’ course offered by the MSRC as a refresher. I was very surprised when I discovered that the instructors are very experienced pilots and that the techniques demonstrated were developed for precise navigation in confined waters.”*

Captain Ricardo Augusto Leite Falcão
President, Brazilian Pilots’ Association

Training Programs Offered by MSRC

Course	Summary	Duration
Bridge Resource Management for Marine Pilots (BRM-P) Initial & Renewal	These courses are designed to enhance the skills pilots require to work efficiently and effectively with the bridge team during an assignment. Approved by the American Pilots’ Association.	2.5 days
Error Detection and Use of Advanced Radar Techniques in Restricted Waters	The course is designed to give pilots state-of-the-art guidance in quickly detecting radar errors, assessing radar limitations. Pilots can bring their own PPUs and use them if they wish. All bridges are equipped with pilot plugs.	2.5 days
Emergency Ship-handling Procedures	Develop the necessary skills to react to any emergency situation that may occur and manage the consequences.	2.5 days
Azimuthing Podded Propulsion	Enable navigators to become acquainted with this “new” mode of propulsion and acquire a good grasp of both the limitations and the advantages of this technology.	2 days
Electronic Chart Display & Information System (ECDIS)	This course is designed to follow all aspects of Transport Canada content on ECDIS (TP 4958) and to train the mariner in the safe operation of ECDIS. Approved by Transport Canada.	5 days
ECDIS Refresher		2 days
Bridge Resource Management (BRM)	Provide masters and navigating officers with awareness of and guidance to good operating practices. Approved by Transport Canada.	5 days
Customized Training Program	To deal with the various human, technical and operational factors which affect the work of pilots, using clients’ local geographic database and/or specific ship models, all developed by MSRC.	



Technology

TRAINING FOR PILOTS

"The instruction is tailored for the professional mariner and in many cases deals directly with circumstances and situations that pilots find themselves faced with on a daily basis."

Capt. Brian Stanley

SENL Pilot, Atlantic Pilotage Authority

AZIPOD TRAINING

"...In conclusion, of all the simulator courses that I have taken during my career, this one was the most practical and instructive."

Pilot

Cornwall District, Canada



Simulation System Using Four Bridges

MSRC's facilities consist of a **full mission DNV Class A*** ship-handling bridge with a 330° horizontal field of view, **three Own Ship Bridges**, a complete suite of navigation and bridge instrumentation, and ability to simulate a full range of vessel types including those with azimuth propulsion systems. The facility also features an **in-house database compilation capability**, which enables it to build, modify or customize simulated **geographic areas** and **ship models** to suit client-specific requirements.

The Full Mission Bridge Simulator complies with the International Maritime Organization's STCW 95.

Specifications:

- > Very realistic visual presentation with 330° in the horizontal plane;
- > State-of-the-art bridge with regard to both equipment and navigational instruments;
- > ARPA radars, ECDIS, AIS target visualization, **Pilot Plugs for PPU**;
- > Conventional propulsion or Azimuthing Podded Propulsion;
- > Very wide selection of ship models with six axes of freedom;
- > Recording of sessions for analysis and feedback.

To provide the highest possible degree of ship-handling realism, MSRC has added three fully integrated handling bridges. One of the three bridges is purposely built to replicate all the controls and equipment found in modern tug wheelhouses and is coupled to high-fidelity tug hydrodynamic models.

All four bridges are networked to a common simulation control system with two primary instructor control positions as well as a suite of self-contained, portable laptop simulators. All simulation equipment has been provided by Kongsberg Maritime.

* Class A (NAV): A full mission simulator capable of simulating a total shipboard bridge operation situation, including advanced manoeuvring in restricted waterways.



SHIP MANOEUVRE TRAINING FOR PILOTS

"All our pilots who have trained at the MSRC agree on the quality of the facilities, the value of the training programs and the professionalism of the resources at their disposal. The GLPA is very satisfied with the results achieved so far and plans to continue using the services of the MSRC in the coming years."

Captain Daniel-R Trottier

Operations Director, Great Lakes Pilotage Authority





Knowledge

General Information

Preferred Teaching Strategies: Presentations, case studies, demonstrations on the Multidisciplinary Navigation Simulator.

Skill Enhancement Activities: Theoretical and hands-on experience using the navigation simulator. Discussions among the participants encouraged during manoeuvres. Each participant is provided with comprehensive course documentation.

Timetable: From 8:30 to 11:45 a.m. and 12:30 to 4:00 p.m.
The timetable can be adjusted according to various restrictions, such as travel.

Entry Standards: Maritime pilots and apprentices.

Language: Presentation and course material in English or French.

Certification: On successful completion of a course, a document will be issued certifying that the holder has successfully completed the course concerned.

Geographical Databases: MSRC features an in-house database compilation capability, which enables it to build, modify or customize simulated geographic areas to suit client-specific requirements.

Ship Models: Mathematical models of ships can be edited using a Model Editing Tool. This program allows MSRC to adjust the mathematical model of the ship and thus create individual models for specific needs.

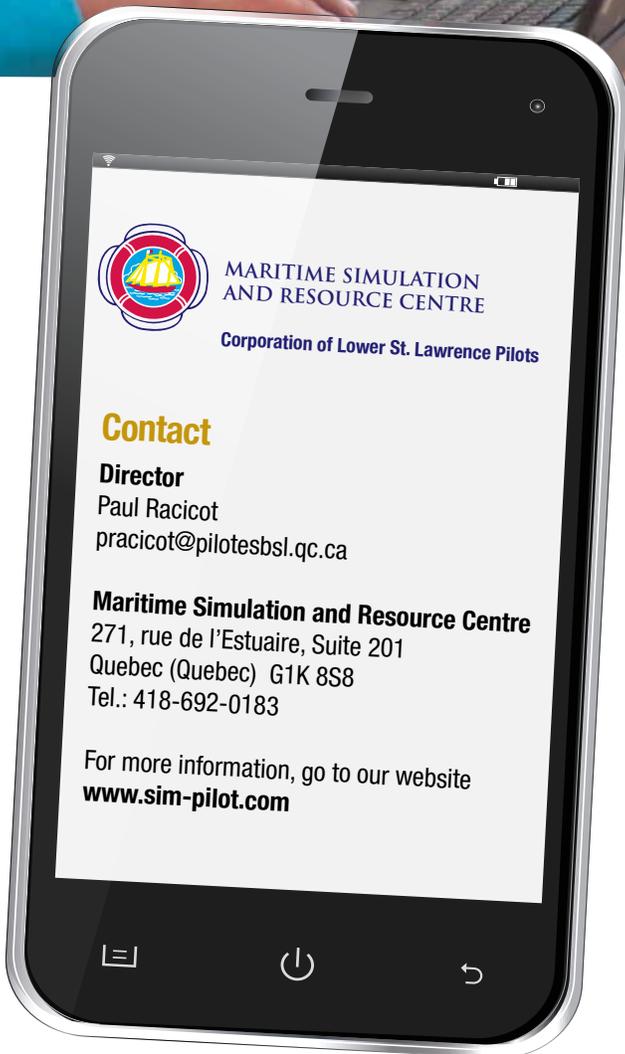
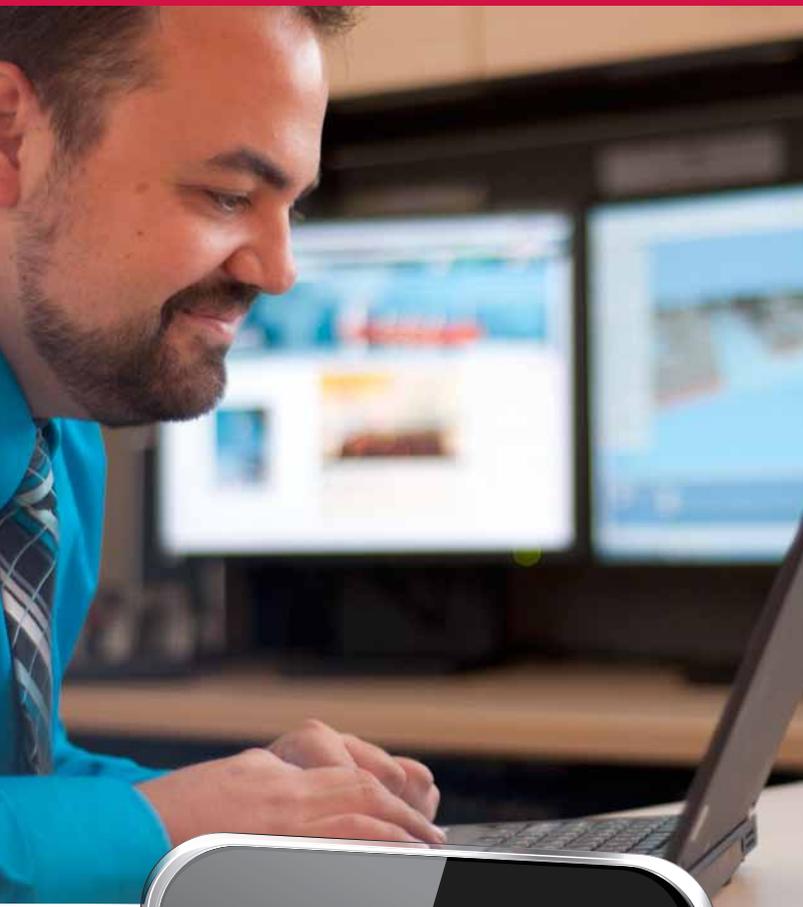
Cooperation with Pilots: As owners of MSRC, the pilots of the Corporation of Lower St. Lawrence Pilots (CLSLP) support the Centre with know-how concerning the ship model and training procedures as well as optimization of simulator performance. Specialized training for worldwide areas can be developed and offered.

Registration: MSRC can offer group training adapted to specific requirements and objectives. Courses can be scheduled for individual groups and companies.

Lodging: MSRC has a corporate agreement with Fairmont Le Château Frontenac for its guests. All reservations should be booked under **Maritime Simulation and Resource Centre (MSRC)**: 1-888-441-1414
<http://www.fairmont.com/frontenac-quebec>

Transportation: MSRC can take care of morning transportation from the hotel to its facility.

Lunch: Lunch can be taken on-site, at the Centre.



I WAS VERY IMPRESSED

"Hats off to the St. Lawrence Pilots that developed the techniques taught in this course for error detection on the radar. I think it behooves all pilots working in narrow confines to understand these errors."

Captain Mike Morris, Houston Pilots

President of Texas State Pilots Association, Member of the APA Technical Committee

A WORLD-CLASS TRAINING FACILITY FOR PILOTS AND MARINERS

"The Centre has dedicated much time and effort to developing a database that reflects conditions in the Great Lakes region in a very realistic manner, and the transfer of this information to state-of-the-art simulation technology represents unprecedented opportunities for pilot training."

Captain Mike Burgess

Canadian Marine Pilots' Association, Vice-President, Great Lakes Region



Experience Quebec City

Colonial City, Contemporary Capital

A visit to the Maritime Simulation and Resource Centre is already a unique experience in itself. Why not take advantage of the opportunity to discover all the beauty and richness of one of the oldest port cities in America—the majestic City of Quebec!

Sure of its charms and just a touch haughty, Quebec City has a gracious yet simple style that continues to delight its visitors year after year. The city has everything it takes to please: an enchanting setting on the St. Lawrence, a priceless architectural heritage, a rich and colourful past and, above all, a warm heart bubbling over with the special *joie de vivre* that has characterized it for four centuries.

It was here at the base of this natural fortress dubbed the “**Gibraltar of America**” by **Charles Dickens** that Samuel de Champlain first established a fur-trading post in 1608. As religious and political institutions sprang up within the fortifications, merchants and craftsmen set up shop alongside the river. A coveted prize that was subject to repeated assault, Quebec City eventually fell to the British in 1759, and New France became a subject of the English crown.

Quebec City (pop. 491,000), **the cradle of French civilization in North America**, is today a busy seaport, an important service and research centre, a cultural hot-spot and, of course, the capital of Quebec. Here you'll find the art of living unsurpassed—and the pleasures of the table high on the list of priorities. Splendid public gardens and close proximity to the great outdoors add to a superb quality of life which does the locals proud.

Quebec was named a UNESCO World Heritage Site in 1985. From the top of its imposing ramparts down to the mighty St. Lawrence, Quebec City, **the only fortified city north of Mexico**, is your invitation to plunge into a colourful pageant of history.

Free Mobile App for Visitors: www.quebecregion.com/app

Direct Flights to Quebec City

Jean-Lesage International Airport (YQB) is 16 km (app. 25 minutes) away from downtown Quebec City with direct flights from:

Chicago (O'Hare)	ORD	United Airlines	2 daily flights
Detroit	DTW	Delta Air Lines	2 daily flights
New York (Newark)	EWR	United Airlines	4 daily flights
Philadelphia	PHL	US Airways	3 daily flights
Washington (Dulles)	IAD	United Airlines	Seasonal
Ottawa	YOW	Air Canada	2 daily flights
Toronto	YYZ	AC/Porter/Westjet	10 daily flights
Montreal	YUL	Air Canada	16 daily flights



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AND RESOURCE CENTRE**

Corporation of Lower St. Lawrence Pilots

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