The human element in safe navigation
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In a world of mass markets and mass production, commoditization is king. Ever since Henry Ford opened the first Model T assembly line in Detroit, manufacturers have strived to standardize their products.

Imagine if navigation could be commoditized. All vessels would be essentially the same in terms of what is required for their safe passage. Not only would navigation systems be standardized, so would the manning of the vessels and the waterways being transited. Of course, this is impossible.

Vessels come in all shapes and sizes, their navigation systems vary greatly, as do the qualifications, duties and experience of crews; different jurisdictions provide different navigational aids and, obviously, every waterway is unique. In some cases, the condition of the vessel, the state of the navigation system or the size of the crew is inadequate, posing special challenges.

It is because of the total implausibility of commoditized navigation that the human element is so vital. In the end, it is up to ships’ masters and pilots to integrate the many unique variables that exist for each transit of every vessel in order to ensure the highest possible level of safety.

Too often, the ship-based ‘human element’ is seen as merely one among several elements necessary for safe navigation, rather than as the element that brings together all others and then applies the judgement that can only come with on-board expertise and experience. It should not be so much a question of integrating this human element with shore-based support and electronic navigational tools as much as a question of how all other elements can best support decision-makers on the bridge.

How the role of the bridge team and the pilot is seen is fundamental to identifying research priorities concerning the human element. In the words of the Report of the Correspondence Group on e-navigation currently under discussion at the International Maritime Organization, it is a question of whether the future belongs to the ‘navigating’ navigator or the ‘monitoring’ navigator. Marine pilots firmly believe the navigating navigator is the only scenario that ensures optimal safety.

Current research tends to focus on the development and application of new technological tools and systems to make navigation safer. In the monitoring navigator scenario, this makes sense but, if the navigating navigator scenario is accepted instead as the best option to ensure optimal safety, then we would be well-advised to focus more than we have on conducting research about the human dimensions affecting safe navigation.

For example, the importance of inter-personal skills for those leading the bridge team has not been sufficiently emphasized, nor have effective training modules been developed to improve such skills. Even more crucial, little research has been conducted in respect of the ability to develop and evaluate skills that contribute to quick thinking and sound judgement in the
maritime sector. These include such basic elements as physical conditioning, cognitive abilities, and psychological characteristics. How should such elements be measured and evaluated in the context of bridge team members and pilots? By what means can these elements be improved? If we truly believe that the human element is the single most important factor in safe navigation, I am convinced that conducting further research on these questions would be very useful.

Captain Simon Pelletier is an experienced mariner, having served on ocean-going vessels for over 20 years. He has sailed on every ocean, on a number of ships, making ports of call on five continents, having achieved the rank of master early in his career.

Captain Pelletier was born and raised near the St. Lawrence River, the gateway between the Atlantic Ocean and the heart of North America. It was only natural that he returned to the St. Lawrence to qualify for his license as a marine pilot in 1996.

A champion of both his profession and marine safety, Captain Pelletier has played a leadership role in the Corporation of Lower St. Lawrence Pilots, which he served as President from 2004 to 2007, and in the Canadian Marine Pilots’ Association, of which he became President in 2009.

Captain Pelletier has also had a long and keen interest in international affairs affecting marine pilots. Elected as Vice-president of the International Maritime Pilots Association (IMPA) in 2008, his work at the international level has so far focused on pilot personal safety and e-navigation. Capt. Pelletier has also participated in a number of meetings of the International Maritime Organization when its deliberations touched on matters of concern to pilots.