

Marine industry

Merenkurkku is a short sea route connecting Finland and Sweden via the cities of Vaasa and Umeå. It is a vital connection for both passengers and cargo.

“When designing Wasaline’s new ferry concept, we’ve had to consider factors such as optimal use of space and the vessel’s power and adaptability,” says **Lauri Haavisto**, CEO of marine engineers and consultants Foreship Oy.

“The waterway is rocky and shallow, and freezes over in the winter. There are strict requirements for stability, especially as the new vessel’s design has had to maximise lane metres for growing cargo volumes,” says Haavisto.

Foreship has been acting as a consultant and technical advisor to the client, Kvarken Link, throughout the development of the new ferry concept and continues to assist the Owner during the building phase as Owner’s technical advisor.

An ecological powerhouse

The ferry must be highly steerable, and its main engines and transmission systems must be very powerful. This is due to the narrow turning zones in the Ports of Vaasa and Umeå, the very shallow waters in places along the route, and the ferry’s strict timetable that must be kept in often difficult sailing conditions.

The work carried out by Foreship’s design team resulted in a sustainable and cutting-edge treble-fuel solution (LNG/LBG/MGO) for an ice-strengthened passenger-car ferry of class Super 1A.

This ropax vessel has space for 800 passengers and 1,500 lane metres for trucks and cars. The environmentally friendly ferry will run on LNG (liquefied natural gas). Aurora Botnia will use rechargeable batteries, which will enable the ferry to lower its carbon footprint in the open sea and reach almost zero-emissions in ports.

The new build will cost about EUR 120 million and is being financed by the client, Kvarken Link AB, which is jointly owned by the City of Vaasa and the City of Umeå. Aurora Botnia is scheduled for completion at RMC’s shipyard in spring 2021, after which it will travel daily between Vaasa and Umeå.



Foreship currently employs more than a hundred marine engineers and other design professionals. The company provides the full spectrum of design services. With new ownership, the Finnish design company has great potential to increase its international footprint in cruise ship design.

Aurora Botnia – a challenge for Foreship

The design of Wasaline’s new ferry has already posed challenges for marine engineers at the design agency Foreship. In addition to being environmentally friendly, the ship must be able to operate to a strict timetable in shallow and freezing waters – and often in difficult weather conditions.

A new owner to boost growth

Foreship currently employs a hundred marine engineers and other design professionals. The company provides the full spectrum of design services from project management to class-compliant design, as well as solutions to cover a vessel’s entire lifecycle.

The company has four offices in Finland, one in Germany, one in Estonia and two in the United States. ✖