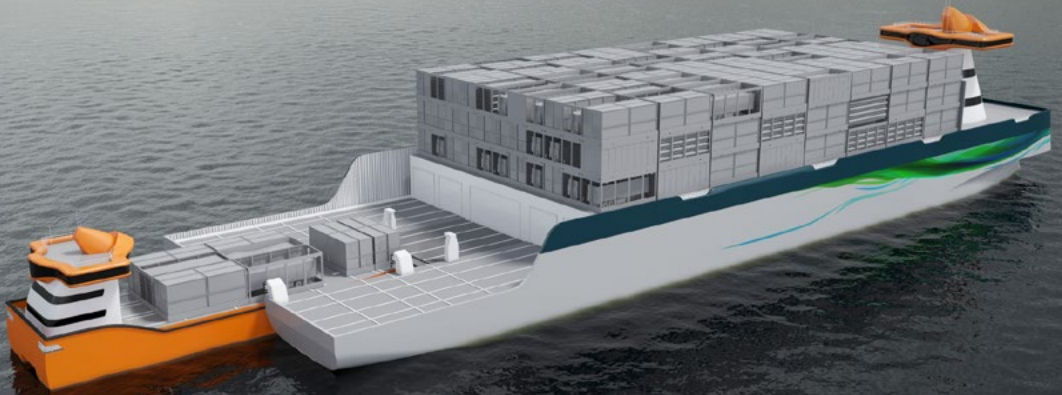




Norwegian Centres of Expertise

NCE Maritime CleanTech



Short Sea Pioneer

The new way of transporting goods at sea

From land to sea

Short Sea Pioneer is a revolutionary two-vessel solution that may change the way we transport goods. This solution will contribute to a significant reduction of road transport but will also help reducing emission of greenhouse gases generated by today's transportation system, both on land and at sea.

AN ENERGY EFFICIENT, LOW EMISSION LOGISTICS CONCEPT

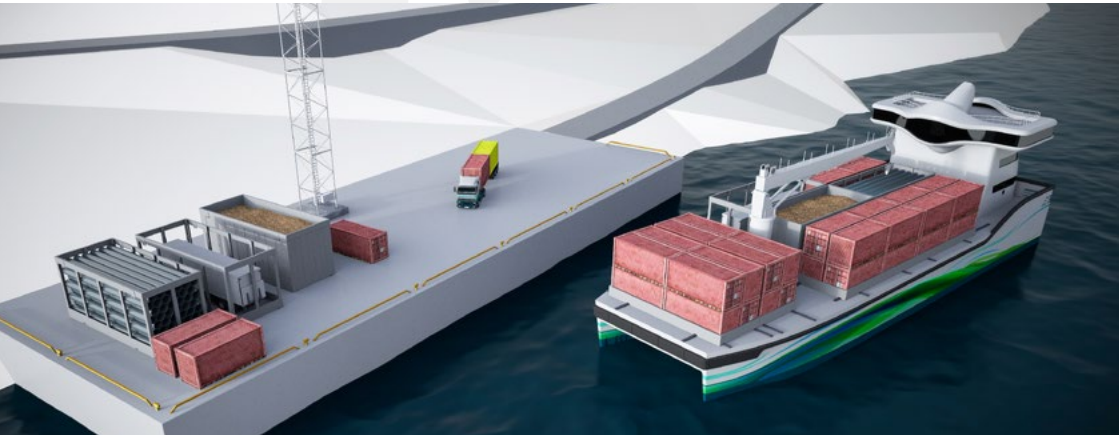
A rapidly growing population and increased urbanization require that maritime freight must relieve the roads even sooner than previously thought. At a low growth scenario EU expects a 60% increase in cargo transport by sea by 2020. At the same time, the maritime industry - with an

aging fleet – is a major contributor to air pollution and greenhouse gas emissions. The Short Sea Pioneer may be part of the overall solution to these key challenges for the maritime industry, both for transport and for the environment. The project aims to develop an energy efficient, low emission logistics system for transportation of goods at sea.



A TWO-VESSEL SOLUTION

Short Sea Pioneer is a two-vessel solution that divides the tasks of the long hauls and distribution of goods in two. It consists of a mother vessel, that will travel along



Short Sea Pioneer has been developed by a joint industrial partnership from the business cluster NCE Maritime CleanTech. The partners are NorthSea Container Line, Wärtsilä Ship Design, Westcon, Servogear and the Norwegian School of Economics.



the route and carry goods to/from major harbours, and a daughter/feeder vessel that travels continuously along the route between mother vessels and land, delivering cargo from ports along the coast. The cargo is quickly shifted at sea, by automated cargo handling systems in transit, with no delays.

The daughter vessel enables shipping companies to collect goods also in smaller, easy access ports and to deliver cargo closer to the customer. This will lead to increased revenue and reduced costs for the owner. The dual vessel solution makes the system highly flexible and easy to scale according to demand.



GREEN

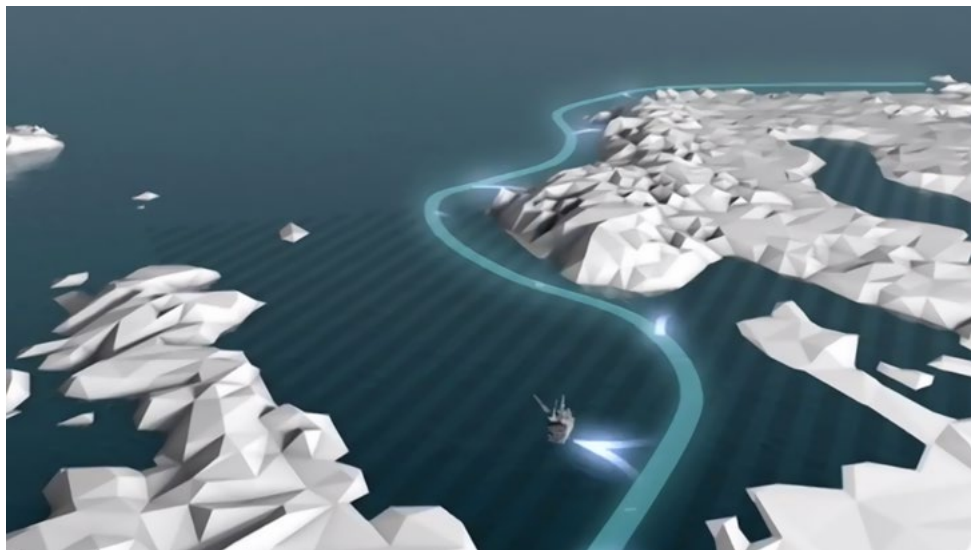
The mother and daughter vessel will operate on LNG or have a hybrid/battery solution. This is an important development to reduce emissions related to transportation in general and especially in port cities where emissions from both

land and sea must be reduced. Further reductions in emissions per transport unit are achieved through better adapted ships that increases transport precision.



SMART

Short Sea Pioneer represents a commercial viable and strong logistics system that is smart, connected and networked. The concept minimises the impact on congested terminals and enables ship owners and operators to increase total volume transported while simultaneously reducing time in port. The system incorporates the whole logistics chain including ships, key land infrastructure and onwards carriage with available transport modes. Lower fuel consumption, optimized vessels and the split logistic management secure improved efficiency for both the ship owner and the cargo owner and at the same time create a minimal impact on the environment.



Contact Us

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NCE Maritime CleanTech

NCE Maritime CleanTech is a world-leading cluster for clean maritime solutions. With partners covering the entire maritime value chain we represent one of the world's most complete maritime commercial hubs. Our cluster participants use their Norwegian maritime expertise, built up over generations, as a springboard for developing and launching new energy-efficient and environmental friendly technologies.

Learn more at maritimecleantech.no.