



The Norwegian Maritime Cluster

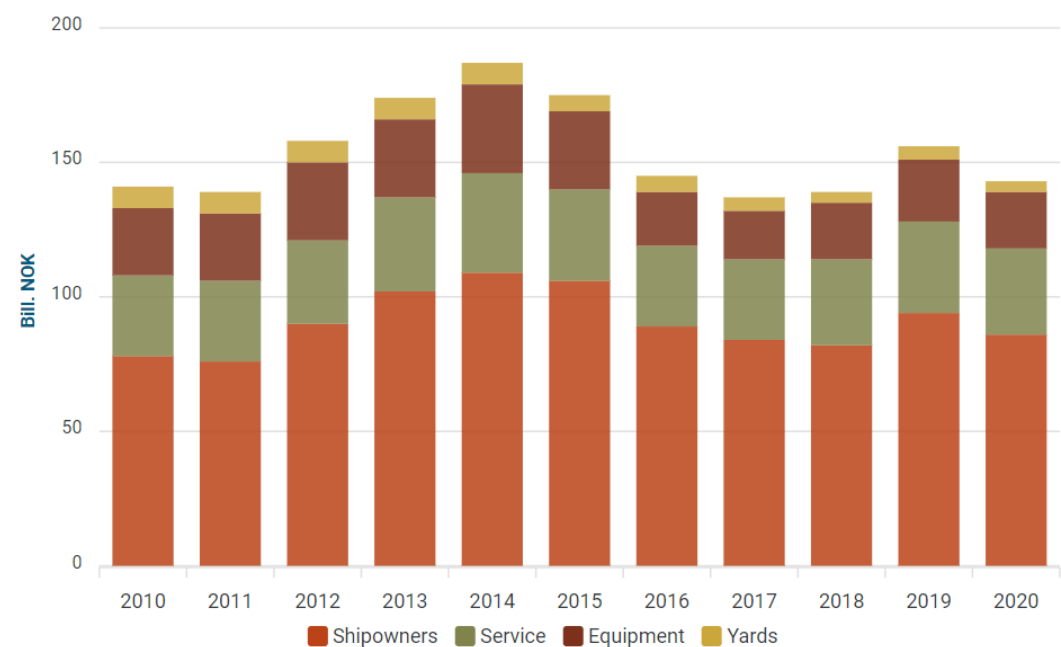


A complete maritime cluster

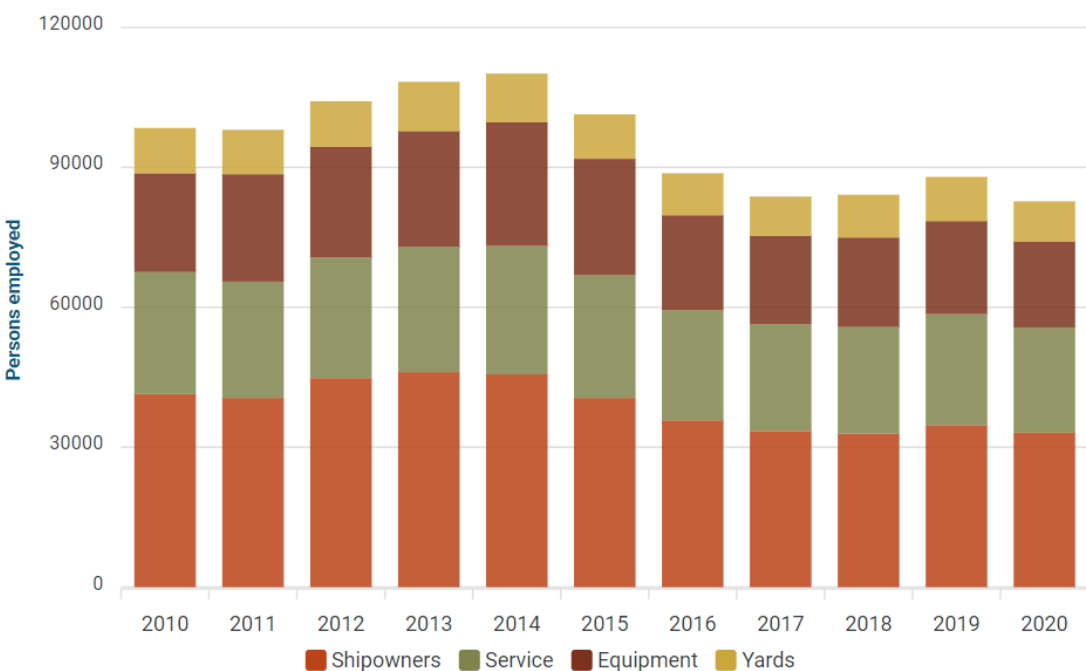


Key figures: value creation and employment in the maritime industry

Value creation by main groups



Employment by main groups



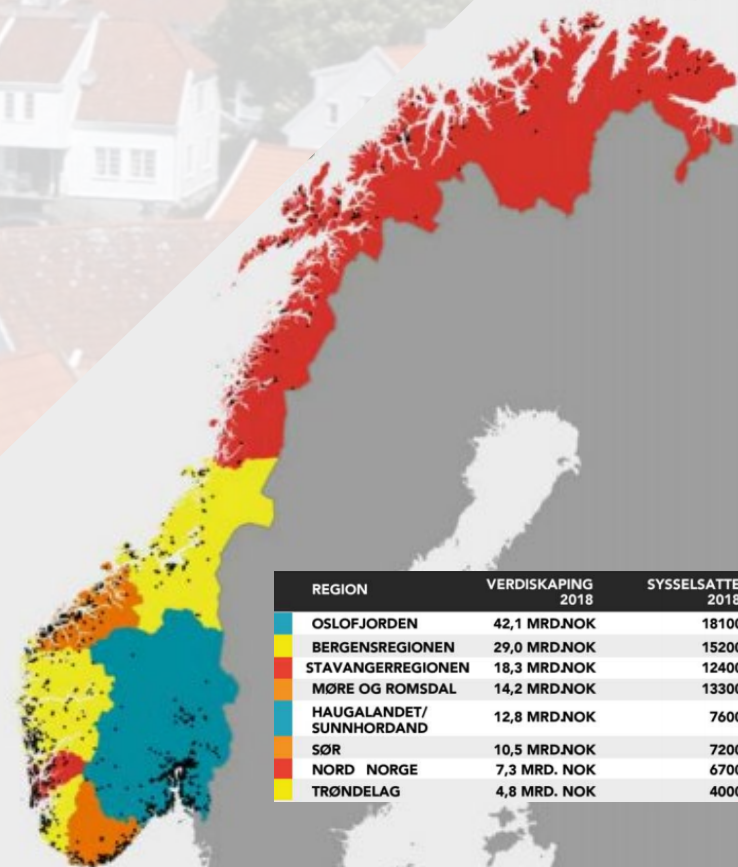
Employment vital for local communities

82 500

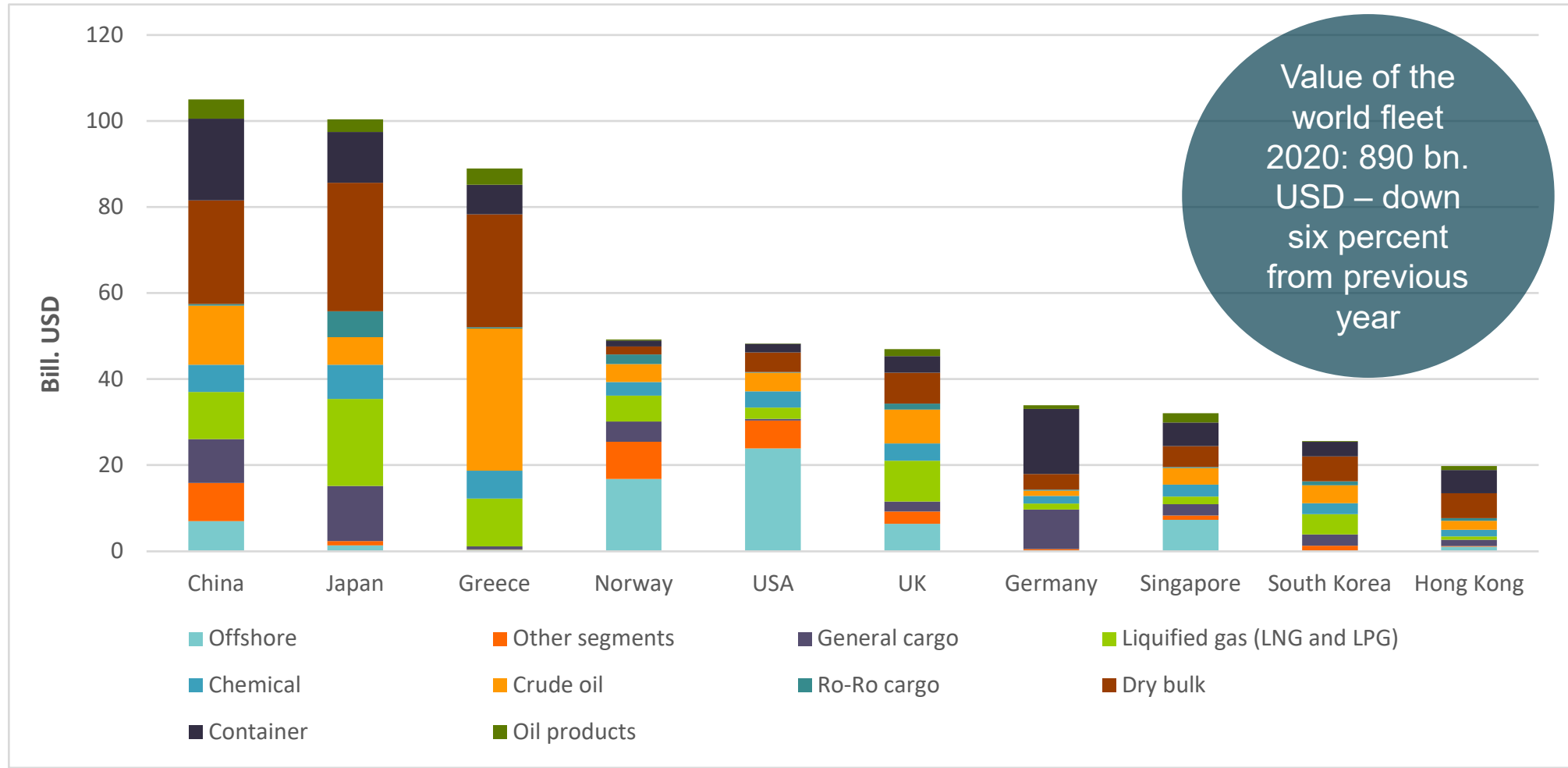
employed in maritime industries

90 %

of employees reside outside Oslo



Norway is the world's fourth largest shipping nation - measured by value



More than 900 billion in potential value creation in 2050

x6,4

Value creation in the maritime industries can be increased by 6.4 times by 2050.

- Great potential in offshore wind, carbon capture and storage, and seabed minerals.
- Requires that the authorities ensure competitive conditions.



Our goals

Norwegian Shipowners' Association members will cut their greenhouse gas emissions by 50 percent per unit by 2030 compared to 2008*

Measures to ensure lower emissions through efficient operation and retrofits to the existing fleet are important, as they cut emissions immediately.

*Emissions per unit refer to transport work or other relevant value creation parameters.



2030

Norwegian Shipowners' Association members will only order vessels with zero-emission technology from 2030

In their role as buyers, shipping companies can specify the technology and machinery solutions for their ships and therefore have a particular responsibility to give clear indication of what they expect shipyards, equipment and engine suppliers, and energy companies to develop in the years to come. Through this strategy, the Norwegian Shipowners' Association intends to communicate the clear expectation that significant resources should be devoted to developing zero-emission solutions that can be commercialised and scaled up as quickly as possible.

The Norwegian maritime cluster aspires to a leading role in the development of emission-free shipping. Guided by the vision of zero-emission ships, Norwegian Shipowners' Association members invite ship consultants, equipment and engine manufacturers, and other stakeholders to contribute their ideas, thinking outside the box and challenging widely accepted restrictions and conventions.



Norwegian Shipowners' Association members will have a climate neutral fleet in 2050

Ships normally operate for about 20-30 years before being taken out of service. In order to reach the goal of zero emissions from shipping in 2050, ships with zero-emission technology must be phased in as quickly as possible, and on a large scale from 2030.

The IMO strategy adopted in April 2018 requires halving greenhouse gases by 2050 compared with 2008. If we assume an annual growth in activity of 1-3 percent by 2050, an absolute halving will require a 70-90 percent reduction in carbon intensity. Shipping companies must therefore, under the IMO climate strategy, find measures that cut emissions by at least 70 percent, and perhaps as much as 90 percent. New low and zero-emission fuels are required to realise such emission cuts and must be made available at ports.



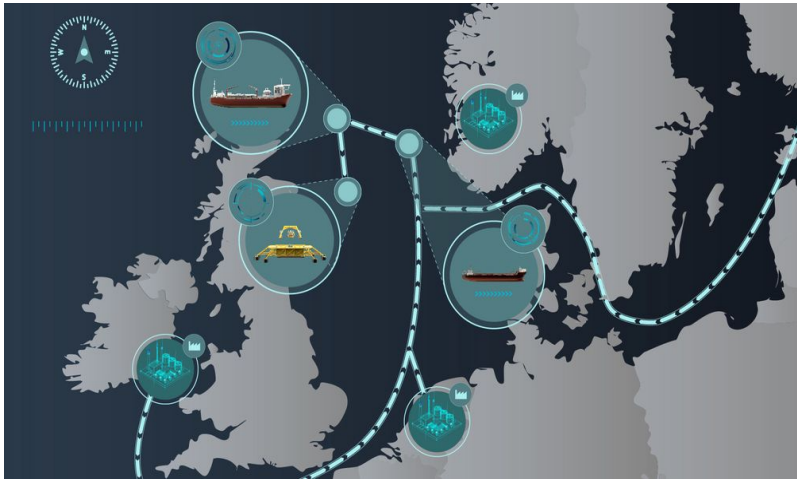
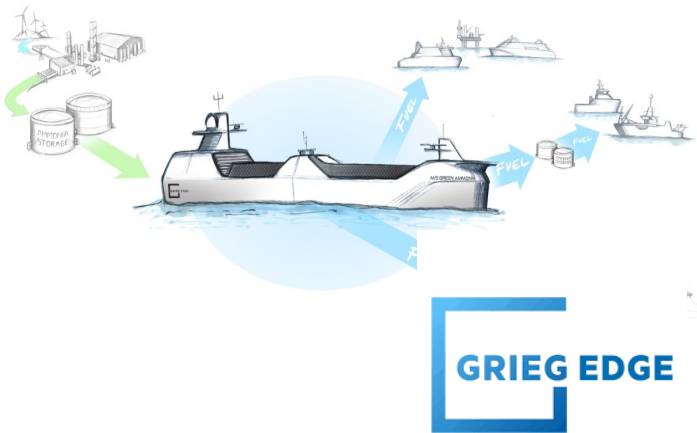
2050

The Norwegian Shipowners' Association will strive for an international ban from 2050 on fuel that is not climate neutral

High ambitions for the development of zero-emission solutions that can be built into new vessels from 2030 and onwards make it natural for the industry to take a proactive position on international regulations on greenhouse gas emissions from ships as well. Given the existence of technology and solutions for zero-emission operation of ships, we believe it is important for international authorities, working through the IMO, to prohibit the use of fuel that is not climate neutral from 2050. Such a ban will be an important driver for developing new technology and alternative fuels, and ensure a level playing field.



Norway as a technology laboratory





THANK YOU

