

## Future Proof Shipping Joins FLAGSHIPS Green Hydrogen Project

08 February 2022

**Future Proof Shipping (FPS) has joined FLAGSHIPS, a leading European innovation project, to bring the shipping company's second zero-emissions inland container vessel, the *FPS Waal*, to Europe's waterways.**

FPS will strengthen the FLAGSHIPS consortium and expand its green hydrogen-fueled fleet with the addition of the *FPS Waal* to the project. Collaborative operations are set to commence this year with the vessel sailing on green hydrogen by summer 2023.

### FLAGSHIPS Project

The FLAGSHIPS consortium aims to raise the readiness of zero-emission waterborne transport to an entirely new level by deploying two commercially operated zero-emission hydrogen vessels in the coming years.

Over the coming months, FPS will work closely with world-leading fuel cell technology experts *Ballard Europe*, ship design company *LMG Marin*, and project coordinators *VTT*. Together, they will collaborate across a broad range of activities to complete the engineering, fuel cell provision, and safety studies required for the vessel's approval, by applying and further developing the existing regulatory guidelines.

*"The demand for more sustainable technologies in inland waterway transport is on the rise. With FPS joining us, we have two groundbreaking vessels part of the FLAGSHIPS project. We aim to raise the readiness of zero-emission waterborne transport in Europe, this truly brings us closer to reaching our goal."* **Jyrki Mikkola, FLAGSHIPS Project Coordinator - VTT Technical Research Centre of Finland.**

### Powering Innovation

The power capacity, size and design of the propulsion system for the *FPS Waal* will need to be optimised to handle the higher energy consumption rates on the Rotterdam to Duisburg section of the Rhine. Future Proof Shipping has already been in discussions with several cargo owners interested in shipping their containers without emissions on this route and who are aiming to move a large part of their sea cargo to inland water transportation.

*"We are deploying our second zero-emissions vessel here to help decarbonise this busy stretch of 240 kilometre inland waterway. This route is longer and has significantly higher and varying power demands than*

the route for the FPS Maas, pushing this project team to elevate their innovation efforts considerably. These are new challenges that we are ready to take on together with the FLAGSHIPS team to blaze a new trail towards zero-emissions inland shipping for all.” **Richard Klatten, CEO - Future Proof Shipping.**

“Inland waterways are important for freight transport in Europe and therefore I am pleased to see a high power container vessel being converted to zero-emission. The FPS Waal conversion will bring knowledge on how to retrofit vessels from diesel combustion to zero-emission alternatives by using battery in combination with green hydrogen in a fuel cell. A key aspect is the replicability of this zero-emission retrofit to similar vessels”. **Bart Biebuyck, Executive Director - Clean Hydrogen Partnership**

Similar to the FPS Maas, Future Proof Shipping aims to retrofit the FPS Waal (109,8 x 11,40 x 3,53 m) to sail 100% emission-free. During the retrofit, the internal combustion engine will be removed, and the new zero-emissions propulsion system including PEM fuel cells, hydrogen storage, battery packs and an electric drive train will be installed. The total amount of power installed will be around 1200 kW and the vessel will have a cargo capacity of 200 TEU after the retrofit.

### **About Future Proof Shipping**

Future Proof Shipping (FPS) ([www.futureproofshipping.com](http://www.futureproofshipping.com)), offers zero-emissions shipping services to enable players across the value chain make the transition to zero-emissions. As a zero-emission ship owner, FPS aims to build and operate a fleet of 10 zero-emission inland and short-sea vessels over the next five years which they will offer for charter to logistics service providers and cargo owners. FPS also facilitates other shipowners and stakeholders in the maritime sector who are ready to make the shift to zero-emissions, through technical support as well as project development and management.

### **About FLAGSHIPS**

The FLAGSHIPS ([www.flagships.eu](http://www.flagships.eu)) consortium includes 12 European partners, with shipowners, Future Proof Shipping, Norled (NO), and CFT (FR) assisted by its support companies Sogestion (FR) and Sogestran (FR); the maritime OEM and integrator companies ABB Marine & Ports (FI) and SEAM (NO); and ship design company LMG Marin (NO & FR). World-leading fuel cell technology is provided by Ballard Europe (DK), with vessel energy monitoring and management by Persee (FR). Management and dissemination activities are provided by VTT (FI) and NCE Maritime CleanTech (NO), respectively.



EUROPEAN PARTNERSHIP



### **About the Clean Hydrogen Partnership**

The Clean Hydrogen Partnership – the successor of the Fuel Cells and Hydrogen Joint Undertaking (FCH JU) – aims to strengthen and integrate European Union research and innovation capacity to accelerate the development and improvement of advanced clean hydrogen applications ready for market, across energy, transport, building and industrial end-uses, while strengthening competitiveness of the Union clean hydrogen value chain. The [three members](#) of the partnership are the European Commission, fuel cell and

hydrogen industries represented by Hydrogen Europe and the research community represented by Hydrogen Europe Research. [Homepage \(europa.eu\)](http://europa.eu)

The FLAGSHIPS project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking under Grant Agreement No 826215. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation program, Hydrogen Europe and Hydrogen Europe Research.