AUTOSHIP
Autonomous Shipping Initiative for European Waters

Embracing the Future of Shipping: AUTOSHIP Leading the Way to Sustainable and Autonomous Transportation

In response to Europe's pressing transportation challenges, innovative approaches are gaining momentum to address congestion, pollution, and traffic issues. Since 2001, the Motorway of the Sea (MoS) concept has been in development, seeking to improve intermodal logistics throughout Europe. With an ambitious goal of transitioning 30% of road freight over distances greater than 300 kilometers to multimodal solutions by 2030 (approximately 216 billion tonne-kilometers), the European Union is at the forefront of this transformative effort. However, the current capacity falls short, necessitating essential improvements.

In the realm of transportation, **short-sea shipping (SSS) and inland waterways (IWT) face stiff competition from trucks across various regions of Europe**. As a result, their market shares have experienced a decline relative to road transport. Recognizing this challenge, **AUTOSHIP is leveraging the advantages of SSS and IWT while integrating autonomous technologies to enhance their competitiveness and sustainability**.

AUTOSHIP has actively collaborated with key stakeholders in the global maritime industry to define, enhance, and validate the Next Generation of Autonomous Ships in real-world settings, by building and operating 2 different autonomous vessels and demonstrating their operative capabilities in SSS and IWT scenarios, with a focus on goods mobility. By combining both evolutionary and innovative technologies, **we have successfully created full demonstrators of autonomous ships and their control centers within the European Union**. This collaborative effort is accelerating the transition to the next generation of autonomous ships, which is expected to have significant impacts on businesses and competitiveness.

CiaoTech – PNO Group has conducted a comprehensive **Cost-Benefit Analysis (CBA) as part of the socio-economic impact assessment of the AUTOSHIP project, highlighting the advantages**

of these modes of transport. The analysis provides evidence of their potential benefits and positive socio-economic impacts associated with AUTOSHIP, emphasizing the need to strengthen SSS and IWT against the dominance of road transport.

AUTOSHIP recently hosted two demo events, where the operational capabilities of Eidsvaag Pioner and Zulu 04, two project business cases, were showcased. These events demonstrated the cutting-edge technological package developed within the project, which includes features such as autonomous navigation, self-diagnosis, prognosis, and operational planning, as well as robust communication technologies ensuring a high level of cybersecurity.

Eidsvaag Pioner test run, Alesund (Norway), May 25th, 2023

On May 25th, 2023, the test run of Eisdvaag Pioner took place at the Norsk Maritime Kompetansesenter in Alesund (Norway).

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Zulu04 test run, Bornem (Belgium), June 1st, 2023

The test run of Zulu04 unfolded on June 1st, 2023, in Bornem (Belgium), where the Inland Waterway testing has been executed on a Class 2 Shuttle barge (PSB) operating in the Flemish region. De Vlaamse Waterweg nv made this inland navigation innovation possible by making Wintam available as a test site.

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The research conducted within the AUTOSHIP project is enabling the industry to address three major challenges: achieving zero-emission transportation, facilitating a substantial shift in transportation modes, and addressing the impending shortage of skilled workers. By demonstrating autonomous technology, we are not only shaping the future of autonomous ships but also leading a comprehensive transformation of the maritime industry, opening doors to endless possibilities for the industry.

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The project has received funding from the European Union's Horizon 2020 research and innovation program under Grant Agreement N°815012.