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Press Release · Pressemitteilung

Technologies driving the maritime transformation: SMM 2026 showcases innovations moving into real-world application

Hamburg, 19 August 2026 – The maritime industry is undergoing a profound transformation. At SMM 2026, companies from around the world will showcase technologies that are already changing shipbuilding and ship operations today. These include numerous **world and European premieres**. One thing is clear: no single technology will define the future of shipping. What matters is how different approaches work together. Many are no longer visions of the future but are already moving towards practical application.

Electrification and new energy solutions gain momentum

Reducing emissions remains one of the key challenges facing the shipping industry. Accordingly, the sector is working intensively to use energy more efficiently on board and bring new propulsion concepts into practical application.

Among the developments on display is the solid-state marine battery from **EPTechnologies** (Denmark), which is set to establish new benchmarks as the first DNV-approved solid-state battery for marine use. Also making their world premieres at SMM are the swappable battery containers from **AYK Energy** (Andorra) and the modular battery systems from **SCIO Energy** (Germany). **Modular and swappable battery systems** open up new opportunities for electrification, particularly in short-sea shipping, inland navigation and hybrid applications.

The **NavHyS** hydrogen project is developing methods for storing and using **liquid hydrogen** in shipping. **Gas and Heat** (Italy) is showcasing an innovative LH2 tank system for maritime applications.

Hybrid propulsion systems are also becoming increasingly important. **Rolls-Royce Power Systems** (Germany) will present its mtu Series 2000 variable-speed gensets at SMM for the first time. They are designed particularly for battery-assisted applications and use as range extenders. According to the company, they can reduce fuel consumption and CO₂ emissions by up to 15 per cent. The ZF 9200 A/V PTI from **ZF Friedrichshafen** (Germany) is designed for hybrid and electric propulsion concepts.

Other approaches focus on **alternative fuels** and **more efficient energy** use on board. One example is BioHFO from **TecnoVeritas** (Portugal), which is designed to enable the use of biofuels and conventional fuels in variable blending ratios, providing an option for reducing emissions from existing fleets. **Alfa Laval** (Sweden/Finland) is presenting the Hukka-5, a new generation of waste

heat recovery systems for cruise and passenger ships. By recovering waste heat from exhaust gases, the system is designed to reduce fuel consumption and further improve energy efficiency on board.

Damen (Netherlands) demonstrates how energy efficiency and fuel flexibility can be combined in a ship concept with its Container Feeder 1100, which will make its world premiere at SMM. Developed for short-sea container shipping, the concept combines an energy-efficient hull and propulsion system with the option of using alternative fuels such as methanol and biofuels.

Wind makes a comeback at sea

Wind-assisted ship propulsion is a particularly dynamic field of innovation. At SMM, international exhibitors will showcase a variety of technological approaches.

Beyond the Sea (France) is presenting SeaKite®, an automated kite propulsion system designed for both newbuilds and existing vessels. Other exhibitors are focusing on sail and wing systems: **Michelin WISAMO** (France) will showcase its automated sail system, **North Windships** (United Kingdom) its DynaRig technology and **Oceanbird** (Sweden) its Wing560. **Stirling Design International** (France), meanwhile, will demonstrate with a wind-assisted Kamsarmax bulk carrier how such technologies can already be integrated into concrete ship concepts. Which system is most suitable depends, among other factors, on the vessel type, trading area and operating profile.

Beyond wind propulsion, structural solutions can also help reduce energy demand. **Hull Vane** (Netherlands) is presenting a **hydrodynamic efficiency technology** designed to reduce fuel consumption through optimised hull hydrodynamics.

Alongside efficiency, underwater radiated noise is receiving increasing attention. **MMG Mecklenburger Metallguss** (Germany) has developed ESPROsilent, a propeller whose optimisation focuses not only on efficiency but also on reducing noise emissions. It is based on simulation methods developed by MMG in several collaborative research projects and validated through measurements on different vessel types and under varying operating conditions. With the IMO working on guidelines to limit underwater radiated noise, the issue is becoming increasingly relevant.

AI becomes a tool for everyday maritime operations

Alongside decarbonisation, **digitalisation** continues to gain importance. Artificial intelligence is increasingly evolving from an experimental technology into a practical tool. The key factor is the tangible benefit it can provide to shipyards, shipping companies and crews.

The RuleAgent from **DNV** (Norway) is designed to simplify working with complex classification rules and support design and approval processes. The **AILA.ai** engineering platform (Finland) uses AI in technical workflows. **Tototheo Global** (Cyprus) is showcasing Echoverse, a digital twin that can be used for condition monitoring, maintenance and optimising ship operations. Astrolabe from **Intellar** (Cyprus), meanwhile, supports crew management.

Admiralty Virtual Ports from the **UK Hydrographic Office** (United Kingdom) promises a direct **benefit for crews**. The digital port familiarisation solution will make its world premiere at SMM. The immersive 3D application is designed to allow seafarers to familiarise themselves with the specific characteristics of an unfamiliar or navigationally challenging port before calling there.

Strix™ Maritime Intelligence from Spanish company **Golden Owl** combines maritime, geopolitical, logistics, weather and market data and is designed to support decision-making in shipping.

Another area of application is intelligent **situational awareness**. **SEA.AI** (Austria), **BOTIX** (China) and **STARLIGHT Italia** (Italy) use sensors and digital technologies to identify objects and potential hazards at sea at an early stage. Such assistance systems not only enhance safety but also create the foundations for partially automated and, in the longer term, autonomous ship operations. **Anschütz** (Germany) is also showcasing a new **navigation assistance system** with AUTONOMICS CGA. It combines sensor data, COLREG-based assessment of traffic situations and manoeuvring recommendations to provide navigators with additional guidance in complex traffic situations.

Autonomy moves beyond the experimental stage

The increasing **automation** of maritime processes is another important field for the future. **Robots and drones** open up new possibilities for inspection, maintenance and safety. Particularly where work is dangerous, difficult to access or labour-intensive, autonomous and remotely operated systems can take over tasks and reduce the burden on crews.

One example is the Hullius underwater robotic system from **Kongsberg Ferrotech** (Norway), which is designed to carry out inspection and repair work on ship hulls. **Flyability** (Switzerland) uses drones to inspect difficult-to-access areas. Regulatory procedures for such Remote Inspection Technologies are also being further developed. Rescue operations are another potential area of application: German start-up **SALVOR** is presenting ASSIST, an autonomous rescue drone making its world premiere at SMM. It combines autonomous flight functions, AI-supported search patterns and the deployment of rescue equipment. AutoHook from **Vestdavit** (Norway) demonstrates how automated systems can take over individual tasks on board that have previously been carried out manually.

Greater safety through intelligent technologies

New technologies are designed to detect hazards earlier and provide better protection for people in emergency situations.

In **fire detection**, **Arges Marine** (South Korea) is presenting intelligent flame and fire detection systems that will make their world premiere at SMM. **LISTEC** (Germany) is also working on early fire detection. The “Kanguro” lifejacket from **Veleria San Giorgio** (Italy) is designed to **protect mothers and newborn babies** in emergency situations. Intelligent technology is also being applied to **man-overboard** incidents. ZOE from **Zelim** (United Kingdom), presented by **Uni-Safe Rettungsgeräte** (Germany), automatically detects people who have fallen overboard and alerts the crew in real time. According to the company, it is the first man-overboard detection system of its kind to be certified to ISO 21195.

Innovations from around the world

SMM once again underlines its role as an international innovation platform for the maritime industry. The developments on display come from numerous countries – and different technologies are increasingly converging.

“At SMM, we can see just how many different solutions the industry is currently developing. Many of these technologies are no longer visions of the future but are already finding their way into real-world applications. We are proud to showcase this diversity here in Hamburg,” says **Claus Ulrich Selbach**, Vice President Exhibitions Maritime & Energy at Hamburg Messe und Congress.

Which technologies ultimately prevail will vary depending on vessel type and area of application.

Press accreditation

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For SMM 2026: [Press Shop](#)

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About SMM

SMM – the world’s leading maritime industry event – will take place from 1 to 4 September 2026 in Hamburg. Under the guiding theme “Driving the Maritime Transition”, it brings together international stakeholders from across the maritime industry to discuss key future topics and actively shape the development of the sector. Around 2,300 exhibiting companies from 70 countries and 50,000 participants from 120 nations are expected. Spanning more than 90,000 m² across twelve exhibition halls, SMM showcases the entire value chain of the industry. The focus is on energy efficiency as a key lever of the maritime transition, complemented by maritime security and defence, artificial

intelligence, decarbonisation, and digital technologies. SMM brings together shipyards and shipping companies, suppliers, classification societies, start-ups, research institutions, policymakers and international organisations from around the world. Over four days, international market leaders, newcomers and key players from across the maritime industry come together in Hamburg. Numerous innovations and world premieres will be presented to the public for the first time at SMM. A comprehensive conference programme accompanies the exhibition, including TradeWinds Shipowners' Forum, the Maritime Future Summit, the gmec – Global Maritime Environmental Congress, the MS&D – International Conference on Maritime Security & Defence, and the Offshore Dialogue. Running alongside SMM, ALL ABOUT PORTS will launch as a new platform for integrated port solutions. The international conference and accompanying exhibition focus on port infrastructure, terminal technology and port logistics, bringing together port operators, technology providers and investors.

Further information: [SMM – Driving the Maritime Transition | 1–4 September 2026](#)

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Main sponsor: DNV

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Conference partners: gmec: Seatrade Maritime News; MS&D: German Maritime Institute (DMI);

Offshore Dialogue: German Association for Marine Technology (GMT); Maritime Future Summit:

HANSA – International Maritime Journal; TradeWinds Shipowners Forum: TradeWinds

About ALL ABOUT PORTS

ALL ABOUT PORTS is an international conference with an accompanying exhibition dedicated to the future of the port industry. The inaugural event will take place on 2–3 September 2026 at the CCH – Congress Center Hamburg and will be held in parallel with SMM – the world's leading maritime industry event. It positions itself as a new platform for integrated port solutions. The focus is on port infrastructure, terminal technology and port logistics, as well as key topics such as digitalisation, automation, sustainability and security. ALL ABOUT PORTS brings together international stakeholders from the port and logistics industry and fosters exchange on innovation and future-ready port locations.

Further information: www.allaboutports.de

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