

# NETWORK DESCRIPTION

07/09/2022



NAME OF THE NETWORK	EcoShip60
AIM OF THE ECOSHIP60 NETWORK	<p>The aim of the network partners is to develop environmentally friendly alternative propulsion and energy systems for small to medium-sized work and patrol boats that allow users to travel at low cost with high performance and a long range.</p> <p>To this end, the small and medium-sized enterprises work together with research institutions to develop appropriate solutions. These are then applied for and implemented in the form of R&amp;D projects for funding.</p>
BENEFITS FOR SMES	<p>The network will contribute to the knowledge and innovative strength of the participating SMEs through the specific R&amp;D projects and the cross-project exchange. With the network, SMEs are pursuing the goal of reacting more flexibly to customer wishes in the future and thus increasing the competitiveness of their companies.</p> <p>With the help of the network and the R&amp;D projects, the project partners will establish themselves in a market for alternative maritime propulsion systems in which only a few suitable products and solutions have been offered to date. In this way, SMEs expand their know-how and range of services and open up new economic potential.</p>
TECHNOLOGICAL FOCUS	<p>Existing technical solutions will be transformed into new holistic solutions in order to optimise the overall ship system and achieve a significant reduction in environmental pollution (CO<sub>2</sub> and noise). Such holistic technical solutions at competitive prices still do not exist today.</p> <p>The special feature of the network approach is the holistic consideration of all technological sub-areas and their interdependencies, e.g. the determination of the consequences of the choice of a propulsion system on the hull and space concept of a ship. A prototype with a length of 8 m is developed for testing under realistic conditions.</p>
R&D PROJECTS	<ul style="list-style-type: none"><li>▪ Automation system</li><li>▪ Compact fuel cell technology for a parameter-limited boat</li><li>▪ Compact gene set with CO<sub>2</sub>-neutral fuel</li><li>▪ Electromechanical pitch adjustment system</li><li>▪ Load-bearing hull-deck connection for material combinations in boat construction</li><li>▪ Module for the bunkering process with alternative fuels</li><li>▪ Sensor-based readout system for detecting energy consumption</li><li>▪ Smart water jet manoeuvring system</li><li>▪ Test bench for hybrid propulsion systems</li></ul>
PROJECT SPECIFICATIONS	<ul style="list-style-type: none"><li>▪ 8 m boat in the versions: leisure boat and work boat</li><li>▪ 16 m boat in the versions: work boat and patrol boat</li><li>▪ 26 m boat in the version: passenger ferry</li><li>▪ 45 m boat in the version: patrol boat</li></ul>

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ACTIVITIES	<ul style="list-style-type: none"><li>▪ Development of R&amp;D projects<ul style="list-style-type: none"><li>- to ensure further funding from the ZIM programme</li></ul></li><li>▪ Joint marketing<ul style="list-style-type: none"><li>- to exploit synergies and demonstrate the strength of networking</li></ul></li></ul>
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NETWORK STRUCTURE	The EcoShip60 network currently comprises a total of 20 partners. There are nine regular partners and eleven associated partners. The latter contribute their specialised knowledge in an advisory capacity. The network is managed by the management agency DSN Connecting Knowledge.
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REGULAR NETWORK PARTNERS - SME	<ol style="list-style-type: none"><li>1. ARMATUREN-WOLFF Friedrich H. Wolff GmbH &amp; Co. KG, Hamburg</li><li>2. DESIOS GmbH, Schwerin</li><li>3. Friedrich Marx GmbH &amp; Co.KG, Hamburg</li><li>4. Lübeck Yacht Trave Schiff GmbH, Lübeck</li><li>5. Otto Piening GmbH, Glückstadt</li><li>6. SDT - Schiffsdieseltechnik Kiel GmbH, Rendsburg</li></ol>
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REGULAR NETWORK PARTNERS - RESEARCH INSTITUTIONS	<ol style="list-style-type: none"><li>7. Fraunhofer Institute for Manufacturing Technology and Advanced Materials IFAM, Bremen</li><li>8. Flensburg University of Applied Sciences, Maritime Centre, Flensburg</li><li>9. Kiel University, Chair of Automation and Control, Kiel</li></ol>
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ASSOCIATED NETWORK PARTNERS	<ol style="list-style-type: none"><li>1. ABEKING &amp; RASMUSSEN Schiffs- und Yachtwerft SE</li><li>2. AVENTICS GmbH</li><li>3. BG Verkehr, Dienststelle Schiffssicherheit</li><li>4. Danfoss Editron</li><li>5. Federal Waterways Engineering and Research Institute (Bundesanstalt für Wasserbau, BAW)</li><li>6. HYDAC International GmbH</li><li>7. ITK-Engineering GmbH</li><li>8. Maritimes Cluster Norddeutschland e. V.</li><li>9. Rolls-Royce Solutions GmbH, Friedrichshafen</li><li>10. RINA Germany GmbH</li><li>11. Association for Shipbuilding and Marine Technology (Verband für Schiffbau und Meerestechnik e.V.)</li></ol>
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FINANCING	From Januar 2022: own funds of the network partners Funded from 2017 to 2021 by the "Central Innovation Programme for Small and Medium-Sized Enterprises – ZIM" of the Federal Ministry for Economic Affairs and Energy
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