

Project Data Sheet

BASIC PROJECT DATA			
Full project title:	SYNERGETICS – Synergies for Green Transformation of Inland and Coastal Shipping		
Short project title: (acronym)	SYNERGETICS	Project logo:	 <p>Synergies for Green Transformation of Inland and Coastal Shipping</p>
Project website:	www.synergetics-project.eu	Project ID:	PA1A172
Need and added value for Danube Region Strategy:	<p>Inland and coastal shipping face great challenges with respect to a significant reduction of greenhouse-gas and air-pollutant emissions resulting from the requirements stipulated in the European Green Deal and the Taxonomy Regulation as well as the fact that improved environmental performance has become a feature of ever-increasing importance to the sector in order to remain competitive.</p> <p>The existing fleet operating on European inland waterways and in the respective coastal areas displays a great potential for greening, which can be unlocked by proper means of retrofit. Currently, different undertakings with respect to greening in the shipping sector as well as other sectors have been carried out or are ongoing. However, the solutions are not brought together in order to facilitate a roll out on a large scale. The project aims at bringing together the relevant knowledge from different sectors, in particular the waterborne one.</p> <p>The goal is the provision of a consistent catalogue of developed and ready to deploy retrofit solutions which would facilitate and accelerate the green transformation of inland vessels and coastal ships.</p>		
Objective(s) of project:	<p>The key objectives of SYNERGETICS are:</p> <ul style="list-style-type: none"> • demonstration of the potentials of retrofit technologies in greening the existing fleets by retrofitting four existing ships in the course of the project duration; • demonstration of the potentials of hydrodynamic improvements in greening of the existing fleets; • demonstration of the value of digital assets in greening the existing fleets; • integration of the knowledge on shipping decarbonisation and air-pollutant emission reduction technologies with experience gained in the pilot projects and in the demonstrations performed within SYNERGETICS, and establishment of the Catalogue of Greening Solutions; • provision of up-to-date Scenarios to Policy-Makers and the Handbook to Vessel Owners for an accelerated greening of inland and coastal shipping; • acceleration of the uptake of the greening retrofit solutions by streamlining regulatory procedures; • propagation of the use of the Catalogue, the Scenarios, and the Handbook developed within SYNERGETICS beyond Western Europe. 		
Planned project activities:	<p>In SYNERGETICS a number of demonstrations will be carried out relating to:</p> <ul style="list-style-type: none"> • hydrogen combustion in internal combustion engines; • methanol combustion in internal combustion engines; • innovative hydrodynamic improvements of the hull and the appendages; • electrification of ships by means of hybridisation of the main propulsion system; • electrification of ships by means of development of power management system for hybrid propulsion and onboard energy storage. 		

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Transboundary impact:	European inland waterways and coastal areas, including the Danube Region		
Project beneficiaries / target groups:	<ul style="list-style-type: none"> • leading research institutions in the field of ship hydrodynamics and energy transition, • innovation centres and • shipping industry associations, • shipbuilding industry, • regulatory bodies, • vessel owners and • technology providers 		
STATUS AND TIME FRAME			
Current project phase: (please tick a box)	<input type="checkbox"/> Definition (e.g. project idea, abstract) <input type="checkbox"/> Preparation (e.g. project proposal, feasibility study) <input checked="" type="checkbox"/> Implementation <input type="checkbox"/> Completion		
Start date:	January 2023	End date:	June 2026
Notes:	-		
PROJECT TEAM			
Project leader:	DST – Entwicklungszentrum für Schiffstechnik und Transportsysteme e. V. (DE)		
Project partner(s):	<ul style="list-style-type: none"> • SPB – Stichting Projecten Binnenvaart (NL) • Scandinaos AB (SE) • MARIN – Maritime Research Institute Netherlands (NL) • Viadonau – Österreichische Wasserstraßen-GmbH (AT) • TTS – Transport Trade Services GmbH (AT) • Kanzlei Anzböck (AT) • EUFRAK - Euroconsults Berlin GmbH (DE) • CRS – Croatian Register of Shipping (HR) • OST – Ostschweizer Fachhochschule (CH) • Argo-Anleg GmbH (DE) • FPS – Future Proof Shipping (NL) • Mercurius Shipbuilding BV (NL) • ZES – Zero Emission Services (NL) • Compagnie Fluviale de Transport (FR) • Sogestran (FR) • Koedood Diesel Service BV (NL) • CMB – Revolve Technologies Ltd. (UK) 		
Contact person:	Name:	Benjamin Friedhoff	
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FINANCING		
Available: (please tick a box)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> Partly <input type="checkbox"/> No	
Total budget:	7,162,920.68 EUR	
Source(s) and amount (potential sources for project ideas): (please tick a box and provide further info)	<input checked="" type="checkbox"/> National/regional funds:	1,840,965.63 EUR (funded by UK and Swiss funding bodies)
	<input checked="" type="checkbox"/> EU funds:	4,184,312.03 EUR (Horizon Europe of the EU)
	<input type="checkbox"/> IFI loans:	
	<input type="checkbox"/> Private funds:	
	<input type="checkbox"/> Other:	
PROJECT ENVIRONMENT		
Project cross-reference:		
Cross-reference ID(s):		
Strategic reference:		
Relevant legislation:		
Other:		
EUSDR EMBEDDING		
Relation to other Priority Areas of the Danube Region Strategy: (please tick a box)	<input type="checkbox"/> PA1b: To improve mobility and multimodality – Road, rail and air links <input checked="" type="checkbox"/> PA02: To encourage more sustainable energy <input type="checkbox"/> PA03: To promote culture and tourism, people and people contacts <input type="checkbox"/> PA04: To restore and maintain the quality of waters <input type="checkbox"/> PA05: To manage environmental risks <input type="checkbox"/> PA06: To preserve biodiversity, landscapes and the quality of air and soils <input checked="" type="checkbox"/> PA07: To develop the knowledge society through research, education and information technologies <input type="checkbox"/> PA08: To support the competitiveness of enterprises, including cluster development	

	<input type="checkbox"/> PA09: To invest in people and skills <input type="checkbox"/> PA10: To step up institutional capacity and cooperation <input type="checkbox"/> PA11: To work together to promote security and tackle organised and serious crime
EUSDR COMPLIANCE	
Compliance with PA1a-related actions and targets of the Danube Region Strategy (new as of 2020):	<input type="checkbox"/> Action 1: Contribute to improve waterway and port infrastructure & management Target: Achieve a notable improvement of the fairway conditions and shore side infrastructure along the Danube and its navigable tributaries, confirmed by the waterway users by means of an annual user survey. <input type="checkbox"/> Action 2: Foster business development Target: Contribute to transnational business-to-business (B2B) meetings on an annual basis. <input checked="" type="checkbox"/> Action 3: Facilitate fleet modernisation Target: Promote the use of EU funds for fleet modernisation and support the set-up of national funding schemes. <input type="checkbox"/> Action 4: Support the further roll-out and enhancement of River Information Services Target: Ensure the online provision, availability and interoperability of up-to-date Fairway Information Services in the Danube Region <input type="checkbox"/> Action 5: Contribute to the enhanced quality of education and jobs Target: Facilitate the implementation of the provisions of Directive 2017/2397 in all Danube riparian states, putting specific emphasis on non-EU riparian states <input type="checkbox"/> Action 6: Contribute to the simplification, harmonisation and digitalisation of administrative processes Target: Achieve a notable improvement of administrative procedures, especially border controls, in inland navigation on the Danube and its navigable tributaries by 2023, as confirmed by the waterway users by means of user surveys
Affiliation to thematic working group of Priority Area 1a of the EUSDR:	<input type="checkbox"/> Waterway and port infrastructure & management <input type="checkbox"/> Business development <input checked="" type="checkbox"/> Fleet modernisation <input type="checkbox"/> River Information Services <input type="checkbox"/> Education & jobs <input type="checkbox"/> Administrative Processes
OTHER RELEVANT ISSUES	
Project requirements:	

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Follow-up project:	
Any other issues:	