



For Immediate Release

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Current Direct, a new research and innovation project funded by the European Commission's Horizon 2020 program, will revolutionize the way we move goods and people by water. The vast majority of water transport in Europe is propelled by dirty, noisy diesel engines. By cutting the cost of today's marine battery electric drivetrains in half and relieving ship owners of the burden of capital expense, Current Direct will enable rapid adoption to reduce greenhouse emissions by 482.000 MT of CO2 equivalents per year.

Current Direct's innovative Energy as a Service platform will enable ship owners to accelerate their participation in the shift to clean energy while creating new business opportunities for shipyards and local entrepreneurs. By changing the model for acquiring and storing energy aboard vessels, Current Direct will create a new energy economy, adding thousands of new jobs. Current Direct provides a vehicle for energy companies, institutional investors, and government stakeholders to participate in the green transformation of Europe's merchant and passenger fleet.

Current Direct brings together thirteen dynamic partners from across Europe's marine electrification value chain. The project is led by Spear Power Systems, makers of the world's lightest, most flexible marine batteries certified to the most stringent international safety standards. Blackstone Technology is lowering the cost of manufacturing tomorrow's 3D printed lithium-ion cells using state of the art active materials from Umicore. The University of Hasselt will use its electrochemical expertise to develop physics-based models of the Current Direct cells that will help optimize the life and return on investment of battery systems deployed across Europe as part of the Current Direct Energy as a Service platform developed by the accomplished engineers and data scientists at Rhoé Urban Technologies and Aviloo. Naval architecture and marine engineering company Foreship will lend its expertise to EDP CNET's in depth knowledge of electrical markets to ensure the Current Direct platform targets optimal vessels and locations maximizing reductions in emissions. VUB's material science experts are creating low-cost composites to improve the safety of battery packs that are designed for recyclability and feature VITO's smart cell monitoring electronics. Wärtsilä will

develop modular battery containers and charging infrastructure that will be certified to innovative standards by Lloyd's Register. The project will culminate in a demonstration of the Current Direct battery, shore charging, and asset management platform by Kotug in Rotterdam.

Vessel operators, ports, shipyards, naval architects, energy companies, certification bodies, regulators, and sustainability focused investors are invited to join us in a series of virtual workshops to share your ideas and learn about how Current Direct can change the way you do business. Contact CurrentDirect@spearps.com to learn more.

About Spear Power Systems

Founded in 2014 by experienced energy storage entrepreneurs Jeff Kostos, President & CEO, and Dr. Joon Kim, CTO, Spear designs and manufactures safe, high performance energy storage systems (ESS) for clients with some of the world's most demanding industrial and defense applications. Spear's Trident brand marine batteries offer world class safety that is 30% lighter and 10% smaller than the closest competitor. Spear takes a chemistry independent approach towards integrating its in-house, designed, scalable electronics, software, and mechanical systems with the most application-appropriate chemistry in order to maximize the value for its clients. For more information, visit SPEARPOWERSYSTEMS.COM.

Partner Websites in order of mention:

Spear: spearpowersystems.com

Blackstone Technology: <http://www.blackstoneresources.ch/>

Umicore: umicore.com

University of Hasselt: <https://www.uhasselt.be/>

Rhoé Urban Technologies: <https://rhoe.gr/en/index.html>

Aviloo: aviloo.com

Foreship: www.foreship.com

EDP CNET: <https://www.edp.com/en/new-rd>

VUB: vub.be

VITO: <https://vito.be/en/subtheme/interfaces-electrical-storage>

Wartsila: wartsila.com

Lloyd's Register: lr.org

Kotug: kotug.com

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