



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 963603

# For Immediate Release

## Full power of Current Direct project brought into focus

May 5, 2021

**The full ambitions of the Current Direct project are crystalized with the official launch of a new website ([www.currentdirect.eu](http://www.currentdirect.eu)) which sets out plans to revolutionize the way goods and people move by water.**

Current Direct, a research and innovation project funded by the European Commission's Horizon 2020 program, aims to cut the cost of today's marine battery electric drivetrains in half, relieving ship owners of the burden of capital expense to enable adoption and rapidly reduce greenhouse emissions.

The new website is a critical step in promoting accessibility to the program and accountability for consortium members. It will serve as the primary point of contact for the consortium and a resource to promote project objectives via social media channels like LinkedIn. Maintaining open and active avenues of communication with interested and affected businesses and agencies is essential to the success of such an expansive and revolutionary program. The website provides industry stakeholder and public access to the project deliverables, several of which are already available for download from the Resources page.

Current Direct's innovative Energy as a Service platform will enable ship owners to accelerate 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, generating thousands of new jobs in the process. 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 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 engineers and data scientists at Rhoé Urban Technologies and Aviloo. Naval architecture and marine engineering company Foreship will lend its expertise to EDP NEW'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 developed together with 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.

To learn more contact: [info@currentdirect.eu](mailto:info@currentdirect.eu)

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**Media:**



**Partner websites** in order of mention:

Spear: [spearpowersystems.com](http://spearpowersystems.com)

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

Umicore: [umicore.com](http://umicore.com)

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

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

Aviloo: [aviloo.com](http://aviloo.com)

Foreship: [www.foreship.com](http://www.foreship.com)

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

VUB: <https://www.vub.be/MACH/FYSC/>

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

<https://www.energyville.be/en/research/storage>

Wärtsilä: [wartsila.com](http://wartsila.com)

Lloyd's Register: [lr.org](http://lr.org)

Kotug: [kotug.com](http://kotug.com)

**Partner background**



**Spear Power Systems**

Spear Power Systems provides advanced energy storage solutions for demanding applications including defense, marine, mining, industrial robotics, and medical devices. Spear's experienced team delivers the cell, battery pack, or integrated energy storage system that provides customers the highest value in terms of cost, performance, and reliability. With extensive knowledge of lithium-ion rechargeable solutions, Spear employs a chemistry agnostic, customer-centric approach to determine the optimum solution for your requirements. Spear has decades of experience designing and manufacturing radically safe and innovative lithium-ion battery storage systems. Spear takes pride in its ability to rapidly design unique lithium-ion battery storage solutions across the globe. With headquarters in USA and offices in EUROPE and SOUTH AMERICA, Spear is uniquely positioned to service international clients wherever they may be.



Blackstone Resources

### **Blackstone Resources AG & Blackstone Technology GmbH**

Blackstone Resources is a Swiss Holding Company, with its legal domicile in Baar, Kanton Zug and is concentrating on the battery technology revolution and metals market. In addition, it sets up, develops and manages refineries used for gold and battery metals. It offers direct exposure to the battery technology and battery metals that is being driven by the demand of electric vehicles that need vast quantities of these metals. These include cobalt, manganese, molybdenum, graphite and lithium. Blackstone Technology GmbH is a 100% subsidiary of Blackstone Resources AG and produces cutting edge 3D printed battery cells in Saxony/Germany



### **Umicore**

Umicore is a materials technology group. It focuses on application areas where it knows its expertise in materials science, chemistry and metallurgy can make a real difference. Umicore generates approximately 50% of its revenues and spends approximately 80% of its R&D budget in the area of clean technology, such as emission control catalysts, materials for rechargeable batteries and photovoltaics, fuel cells, and precious metals recycling. Umicore's overriding goal of sustainable value

creation is based on this ambition to develop, produce and recycle materials in a way that fulfils its mission: materials for a better life. The Umicore Group has industrial operations on all continents and serves a global customer base; it generated around €3 billion revenue, 6% of which being invested in R&D, in 2017 and currently employs around 10,000 people.



### **Universiteit Hasselt**

Hasselt University (UHassel) is a young, independent and innovative university with six faculties, one School and six research institutes. About 38% of the PhD students at Hasselt University are from outside Belgium and 12% of the academic staff is international. In the Times Higher Education Best Small Universities Ranking, a sub-ranking focusing on universities with fewer than 5000 students, Hasselt University is ranked as number 15 worldwide. In 2017 Hasselt University closed 770 research contracts with the industry worth 15.5 million euros. UHassel has 35 active patents in portfolio and 15 license agreements and now counts 11 active spin-offs.



### **Rhoé**

Rhoé is an award-winning Greek technology startup that develops state-of-the-art products for the transportation and energy sectors. Rhoé's in-house experts work with cities, businesses, and research institutions to help them bring cutting-edge products to market, cut down on red tape and drastically improve productivity.



### **Aviloo**

AVILOO is a start-up based in Austria that has developed the first independent State of Health battery test for Electric vehicles for which it has won major European research funding projects. AVILOO further provides sophisticated battery monitoring services for battery installations of all kinds. AVILOOs core technology consist of the AVILOO-Box, a high performing IoT Monitoring device, the AVILOO Battery Data Cloud Platform able to handle extremely large data sets and a deep data analytics and battery know how.



## **Foreship**

Foreship Ltd. is an independent company specializing in ship design and engineering. With eight offices and located in four countries, Foreship's global team employs approximately 100 naval architects, marine and structural engineers, interior and HVAC designers and electrical engineers. It provides comprehensive business case and technical consultancy on ship and offshore design, project management and delivery, offering advisory services to privately- and publicly-funded stakeholders. Customers include the world's largest cruise lines; passenger, cargo and offshore shipowners; leading shipyards and maritime suppliers. Foreship's services include feasibility studies, evaluation of project facilities and suppliers, safety and environmental assessments, expert representation, third-party reviews and on-site supervision. For every project, Foreship's approach is based on 'lifecycle management'. The company also shares its expertise with clients, while cumulative data is shared on an anonymized basis with major maritime associations to benefit industry insight.



## **EDP NEW**

EDP NEW - Center for New Energy Technologies, founded in 2014, is a R&D Centre of the EDP Group aimed at creating possibilities to lead the energy transition. It is fully committed to research and development with a strong focus in technology demonstration projects. EDP NEW is organized in 5 knowledge areas each representing a crucial future innovation pillar for the EDP Group: Interoperable Smart Energy Grids, Positive Energy Communities, RES technologies, RES integration and Flexibility and Digital Energy. EDP NEW has carried out work in several R&D projects in all the energy value chain, most of them financed by the EU H2020, adopting an integrated and sustainable approach towards disruptive solutions that empower its partners and bring value to the shareholders.



### **VUB's FYSC research group**

The research unit 'Physical Chemistry and Polymer Science' (FYSC, headed by H. Rahier) of the Vrije Universiteit Brussel is part of the Department 'Materials and Chemistry' (MACH) of the Faculty of Engineering. The research activities of FYSC include '(molecular and supra-molecular) structure – processing – property' relations in polymers for developing materials with improved performance, non-traditional cements, alkali activated materials and thermal analysis.



### **Vito**

VITO is an independent Flemish research organization in the area of cleantech and sustainable development. Within the EnergyVille partnership, VITO has further expanded its renowned expertise in the field of batteries, based on long-standing activities on battery testing, modelling and the development of advanced battery management system technology. VITO is well represented and embedded in both national and international battery projects and initiatives and is a member of the Batteries European Partnership.



### **Wärtsilä**

Wartsila Norway AS is a manufacturer, system integrator and product deliverer of process, machinery, electrical and control systems primary for the marine and offshore industry.



### **Lloyd's Register**

Lloyd's Register EMEA IPS (Lloyd's) is part of the Lloyd's Register Group, a global independent risk management and safety assurance organisation that works to enhance safety and to approve assets and systems at sea, on land and in the air. As a classification society, the main work of the Lloyd's Register Marine branch is on classification (based on its own rules) and statutory (as a recognized organization) during the design, construction and operation of ships. Lloyd's Register works closely with other

regulatory bodies, either international (e.g. IMO, ISO, IACS), transnational (e.g. EU) or at national level (member states).



### **KOTUG International**

KOTUG is a leading maritime company, offering its innovative towage and maritime related services on a global scale. Adding value by sustainability-focused innovations, KOTUG provides the complete portfolio based on a combination of long-standing knowledge and advanced technologies. From designing, building, chartering and operating new vessels to training people and providing innovative consultancy services. KOTUG is active in Europe, Russia, Asia, Australia, Africa, Middle East, North and South America and the Caribbean and continues to expand its operations worldwide. KOTUG is family-owned and firmly committed to the highest industry standards of health, safety, environment, quality and security.